

NAC
6827-
J68B4

CONNELT
UNIVERSITY

1
62
Jas E.

CORNELL
UNIVERSITY
LIBRARY



FROM

The Commission

NAC 6827 .J68B4

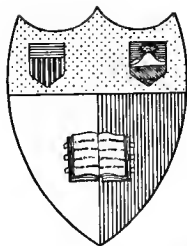
line

MAR 4 1984		
SEP 5 1984		
~~7~~		
GAYLORD		PRINTED IN U.S.A.

GAYLORD

PRINTED IN U.S.A.

Musket City Plan



Cornell University Library
Ithaca, New York

FROM

Joliet City Plan Com-
mission



The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

<http://www.archive.org/details/cu31924024416764>



JOLIET'S RIVER FRONT OPPORTUNITY—View looking north from the Jefferson Street Bridge, showing the site and surroundings of proposed public buildings at the right, and the parkway and public gardens at the left.

CITY PLAN OF JOLIET

By
EDWARD H. BENNETT
and
WILLIAM E. PARSONS
City Planners

Assisted by H. T. FROST



LOUIS JOLIET

Published by
JOLIET CITY PLAN COMMISSION
JOLIET, ILLINOIS

1921

JOLIET CITY PLAN COMMISSION

GEORGE WOODRUFF, Chairman

PHILIP C. MOCK, Vice Chairman

J. R. BLACKHALL, Vice Chairman

W. F. PITCHER, Vice Chairman

JOSEPH DUNDA, Treasurer

CHARLES J. KELLEM, Secretary

CIVIC CENTER

William C. Barber, Chairman

Dr. Harry W. Woodruff, Vice Chairman

Mrs. J. F. Nachbour, Secretary

John N. Bock	Henry Leach	Peter Shutts
Horace H. Brown	Howard E. Leach	Mrs. James B. Speer
Mrs. Nathan J. Howe	Robert F. McRoberts	Jerome P. Stevens
Morris J. Lauer	S. S. Parks	H. A. Stillman

FINANCE

William Redmond, Chairman

Theo. R. Gerlach, Vice Chairman

Margaret Haley, Secretary

Richard J. Barr	Fred M. Chamberlin	James Lyons
Joseph F. Byrne	T. F. Donovan	Maurice L. Stern
Robert A. Cameron	Frederick A. Hill	John H. Savage

PARKS AND PLAYGROUNDS

F. X. Friedrich, Chairman

Mrs. H. J. Sawyer, Vice Chairman

Mrs. Adele Fay Williams, Secretary

Werden Buck	Margaret Haley	Rev. W. H. Macpherson
George M. Campbell	James R. Hobbs	William G. MacLean
George J. Cowing	C. H. Hosler	R. O. Stoops
Thomas C. Davis	T. F. Hotchkiss	George B. Wiswell
James H. Ferriss	C. W. Jordan	George Woodruff
	Frank J. Zielinski	

PUBLICITY

James A. Bray, Chairman

Joseph F. Byrne, Vice Chairman

Mrs. Edward Corlett, Secretary

John W. Downey	Charles J. Kellem	Rev. John Plevnik
Joseph Dunda	A. S. Leckie	Rev. T. F. Quinn
Rev. Thomas K. Gale	Mrs. Robert W. Martin	Dr. F. D. Rich
Rev. E. E. Hastings	Philip C. Mock	John J. Sharpe
	Rev. A. S. Olszewski	

RAILROADS

Robert Pilcher, Chairman

James Lyons, Vice Chairman

H. C. Griffin, Secretary

George A. Barr	Thomas Greif	Guy L. Meaker
William Bell	Peter G. Lennon	Lewis Moore
W. B. Curtis	D. R. Mathias	Pence B. Orr
M. A. Felman	P. F. McManus	J. S. Sutherland
T. F. Goodson	George O. With	C. E. Wilson

STREETS

Harvey E. Wood, Chairman

William Redmond, Vice Chairman

F. J. Schmeisser, Secretary

Henry R. Akin	Thomas Gorey	L. C. Rugen, Jr.
James L. Bannon	Dr. Grant Houston	George M. Scholl
Mrs. Nellie Clyne	Albert E. Hutchinson	Ed. R. Smith
N. J. Comerford	Harry F. Leach	Andrew S. Witwer
Edith I. Goodspeed	E. J. Murphy	John W. Young

STREET FIXTURES

John F. Quinn, Chairman

Mrs. Jane A. Shreeve, Vice Chairman

Joseph C. Hunt, Secretary

J. O. Barrett	Edward R. Daley	Arthur A. Lennon
B. A. Beach	A. C. Dillman	Mrs. M. B. Mulock
Harry J. Blacy	A. E. Dinot	Ernest J. Sallenbach
E. A. Brewster	William H. Kaffer	Maurice L. Stern
John T. Clyne	Arthur C. Leach	Joseph J. Wellnitz

STREET TRANSPORTATION

J. A. Ohlhaber, Chairman

L. A. Sherwood, Vice Chairman

Michael J. Ryan, Secretary

J. R. Blackhall	Edward Corlett	Nunzio di Lorenzo
Mrs. R. J. Barr	Dr. M. W. Cushing	J. L. McCulloch
G. E. Brereton	T. F. Donovan	R. A. Moore
Horace G. Brown	F. E. Fisher	Dr. W. A. Smith
Gilbert Cooper	Mrs. David Hirschfield	Frank J. Wise

WATERWAYS

C. D. O'Callahan, Chairman

J. C. Adler, Jr., Vice Chairman

George M. Munroe, Secretary

Fred Bennett	Lawrence H. Henschen	H. M. Snapp
C. C. Chaney	Frederick A. Hill	J. B. Tinnon
S. J. Drew	Hugh J. Mitchell	E. M. Walker
Thomas P. Feely	W. F. Pitcher	John D. Walker
Theo. R. Gerlach	Joseph N. Schuster	

ZONING AND HOUSING

Charles A. Noble, Chairman

Mrs. F. A. Hill, Vice Chairman

George R. Hill, Secretary

Henry C. Ahrens	A. D. MacIntyre	Oscar J. Stephen
J. E. Chalmers	W. L. McNiff	H. W. Tomlinson
Fred M. Chamberlin	F. W. Pohl	Dr. Roy L. Watson
George J. Clare	John Romano	C. W. Webster
J. C. Hanawalt	L. C. Stephens	Mrs. S. F. Wilhelmi
W. A. Knapp	Mrs. M. B. Schuster	

FOREWORD

Theodore Parker has said: *"The union of men in large masses is indispensable to the development and rapid growth of their higher faculties. Cities have always been the fireplace of civilization whence light and heat radiated out into the cold world. But we have much to learn about the physical improvement of our centers of population."*

IN PRESENTING this book the Joliet City Plan Commission puts into crystallized form the work of many months. During this time the Commission has had the services of men who are among the most eminent city planners in the United States, who have studied the problems of the present and future Joliet from every possible angle.

The City Plan, presented herewith, being the work of these city planners, takes into consideration the probable growth of the city for many years to come and gives the citizens of this community a definite course to follow in the future building of the city.

It is the aim of the plan to make Joliet as ideal a Community as possible, and though beauty has been kept in mind at all times, every recommendation made has been carefully weighed on the scales of practicability. The Joliet presented in these pages is a Joliet that can and should and will—with your help—become an actuality.

Therefore in presenting this City Plan to the people of Joliet, the Commission seeks and solicits the co-operation of every individual in this city in the creation of the greater and better community that is pictured and described in these pages.

THE JOLIET CITY PLAN COMMISSION.

“Make no little plans; they have no magic to stir men’s blood and probably themselves will not be realized. Make big plans, aim high in hope and work, remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itself with ever-growing insistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty.”

—*Daniel H. Burnham.*

CONTENTS

FOREWORD	3
INTRODUCTION	7
PLAN OF JOLIET—Scope of the Report	8
AREA, POPULATION AND GROWTH.....	9
THE STREET SYSTEM.....	13
Car Line Streets.....	14
Widths of Major Streets.....	16
Block Lengths	16
Street Widening.....	16
Minor Streets	16
Grades	17
Recommendations on Streets.....	17
RAILROADS AND THE CITY PLAN.....	22
Freight Terminals	23
Proposed Freight Interchange.....	23
Union Passenger Station.....	24
ZONING AND RELATED SUBJECTS.....	26
Housing	30
Street Transportation	30
THE RIVER	33
Water Transportation and Power.....	33
The Potential Recreational Features of the River	34
MUNICIPAL BUILDINGS AND CIVIC CENTER	35
PARKS, SCHOOL GROUNDS AND RECREATION	37
Hickory Creek	39
Other Proposed Parks.....	39
Parkways	39
SPECIAL FEATURES	40
Airplane Station	40
Municipal Art and Architecture.....	40
Street Fixtures	40
Sewers	41
Markets	41
Retail Markets	42
Surveys	42
CONCLUSION	43
City Bonds, City Planning and Elementary Justice.....	43
Less Ultimate Expenditure for an Ultimately Greater Result.....	43
The City's Continually Increasing Capacity.....	44
L'ENVOI	45

LIST OF PLANS AND ILLUSTRATIONS

JOLIET'S RIVER-FRONT OPPORTUNITY.....	FRONTISPIECE
Old View of Joliet.	Scene on Western Avenue.
Chart Showing Growth in Population.	Map of Present Occupancy of Land.
Map of the City and Vicinity Showing Existing Con- ditions.	General Zoning Plan.
Plan of the City and Vicinity Showing Proposed Im- provements.	Paris, Zoning Conditions.
General Bird's-eye View, Visualizing the Future City.	Bourneville Factory Area.
General Plan of the City Showing Proposed Improve- ments.	View of the Desplaines River at Jefferson Street, Showing the Proposed River-Front Parkways.
Street Views in Paris.	Lyons, Bridges Across the Rhone.
View from the Union Depot Looking North on Chi- cago Street, Showing Opportunity for Development.	Lyons, View of the River Front.
View from the Union Depot Looking West on Jeffer- son Street.	Plan of the Commercial and Civic Center.
The Union Depot, Joliet.	Proposed Civic Center at Bloomington, Ill.
Scene on Richards Street.	Springfield, Mass., Municipal Building Group.
Housing Development at Perryville, Md.	Scene in Pilcher Park.
	Joliet Township High School.
	Scene in West Park.
	Scene in Highland Park.
	Scene in Dellwood Park.
	Arch of Triumph, Paris.



AN OLD VIEW OF JOLIET.
Jefferson Street Looking East from Ottawa Street.

INTRODUCTION

JOLIET, situated forty miles from Chicago, a run of one hour and a quarter, connected with it by three rail lines, is a railroad center of importance. Due to this location it has become a considerable center of industry in which are employed upwards of 16,500 men.

The Lakes-to-Gulf Waterway which undoubtedly will be ultimately carried out will contribute to the commercial growth of Joliet.

Its character is mainly industrial and its population correspondingly so. Tributary to Joliet is a fertile agricultural territory whose population does business in Joliet. In fact a well defined area of the city is devoted to the wholesale handling of farm products and implements.

The site of the present city is rolling and presents attractive variations of planes marked naturally enough by corresponding occupancy of an industrial or residential nature.

The residence areas both to the east of the business center and west across the river are exceptionally attractive, and an opportunity is afforded to extend this western section and create an unusually fine residential area.

That Joliet can accomplish fine things is evident in the relatively complete down-town grade separation of railroads and streets and the construction of fine buildings, including the railroad station, post office, schools and other public and private buildings. Its school houses especially set a uniformly high standard.

The same spirit of achievement is also evident in the proposals made by the city for an extensive scheme of park development on the west bank of the river in connection with the proposed new waterway. This plan is endorsed by the report and incorporated with minor modifications in the plan.

These facts carry assurance of a will to accomplish further improvements. It should not stop short of a common desire to mould the city into as perfect a form as may be possible through planning and co-operation.

PLAN OF JOLIET

Scope of the Report

THE scope of this report is general as also is that of the plans submitted with the report, of which they are a part. It deals with existing conditions and with the future possibilities of the city in its expansion and orderly development.

It is recognized in the report and should be understood by the promoters of the plan that the Joliet of thirty years from now will be one of greatly increased business and industrial activity and of expanded residential areas. Anticipating these needs the plan is framed in the hope that it will serve as a guide to the growth of the city as it expands.

It is not assumed that all or even many of the suggested improvements or developments will be undertaken at once, but that they will be accomplished as necessity demands and the resources of the community make them possible.

At the same time it should be pointed out that the proper improvements provided now at some cost to the present generation and also in part to those who come after, will be in the nature of a splendid investment in so far as the prosperity, health and general quality of the city is concerned.

The recommendations are such that if carried out they will form the basis for the development of Joliet as a city of considerable size. The more important problems of the city are herein treated as is consistent with the general report.

The developments that may be carried out in connection with the plans will have important results, dovetailing one into another, all of which will affect the welfare of the community. The problems are far reaching. The strong influence of the location of the railroads on the location of industry and on the location of industrial housing has been taken into consideration in the recommendations. The influence also of the street plans upon the development of Industrial and Housing Zones has been studied.

The aim of the plan is to correct conditions of living so that, with the co-operation of the citizens themselves the maximum of health, happiness and efficiency may be obtained.

The plans, if properly understood, should create in the minds of the people a sense of the entity of the city, the interdependent relationship of its various elements and the responsibility of one section toward another; such as to promote in a true sense the spirit of co-operation.

“City planning is economy. It is not the economy of doing without. Doing without is not economy. It may be extravagance. A city that does without parks and playgrounds in abundance is extravagant in health and life. A city that ignores an opportunity for the acquisition of the things that make for health and happiness may lose the opportunity altogether. City planning is the economy of action today that insures possession tomorrow.”

AREA, POPULATION AND GROWTH

IN laying down a complete city plan it is necessary to look into the future and to deal with the areas required to accommodate the growth of the city. As the exact direction of growth cannot always be foretold, it is necessary to extend these areas, and consequently the street plan, in advance of actual development for the purpose of designing a plan and for the purpose of safeguarding the necessary lines of communication.

Opportunity must be given for competition or choice in building areas and those areas which lie well beyond the lands now subdivided and which the promoters of land subdivision would naturally aim to develop are included in the plan. The main thoroughfares must be projected into the outlying districts, leaving the subdivisions to be adjusted according to the needs of the individual projects promoted.

The plan as laid out is based on this principle. The present population of Joliet and adjacent territory is over sixty thousand, the built-up area occupying five thousand acres.

The area of Joliet when it will have reached a population of 160,000 or two and one-half times its present population (and this may be realized within 30 years) will require the area of 20,000 acres with a density per acre of eight people. But as already stated, the growth not being by any means equal in the various districts, the general arterial system is designed well beyond existing subdivisions and platted areas and should be schemed beyond those areas which will be required for a population greater than that of the present. With the principal lines of communication located, their widths determined with reference to street transportation and their character studied with reference to occupancy, the planning of new subdivisions becomes co-operative and the interests of the owners and those of the community are safeguarded.

The average density of population per acre over the gross area of Joliet today is about 11.5. As the city grows the density with reference to areas platted will decrease. This means that outlying areas will be subdivided in anticipation of the demand at a rate which is greater than the rate of population increase.

The area indicated as to be occupied on the General Zoning Plan is approximately 17,000 acres and will accommodate 135,000 people.

The population, built-up area and population per acre are tabulated herewith:

JOLIET—POPULATION AND DENSITY.

Year	Population	Number of Acres in Built-Up Area	Population per Acre
1890	23,300		
1900	29,300		
*1910	34,670	2,430	14.2
1915	51,407	4,200	12.2
1920	65,000	5,650	11.5
1930	100,000	10,000	10
1940	135,000	16,900	8 [See Note]
1950	160,000	20,000	8

*Within city limits only.

NOTE: This is the area shown built-up on the General Zoning Plan.

DENSITIES OF POPULATION OF OTHER CITIES.

Elgin.....	6.5 people per acre of land within city limits
Aurora.....	8.1 people per acre of land within city limits
Bloomington.....	9.1 people per acre of land within city limits
Evanston.....	6.3 people per acre of land within city limits
Rockford.....	9.4 people per acre of land within city limits

It is evident that the estimated population increase is conservative, the annual rate of increase having been reduced rapidly to below 2 per cent for the year 1950. (See Chart on page 11.)

The density of population in the various sectors of the city will naturally vary according to the character of the occupancy. This is a matter touching on the housing question but may be controlled to a very large extent by the proper districting regulations, which subject is dealt with under the head of Zoning.

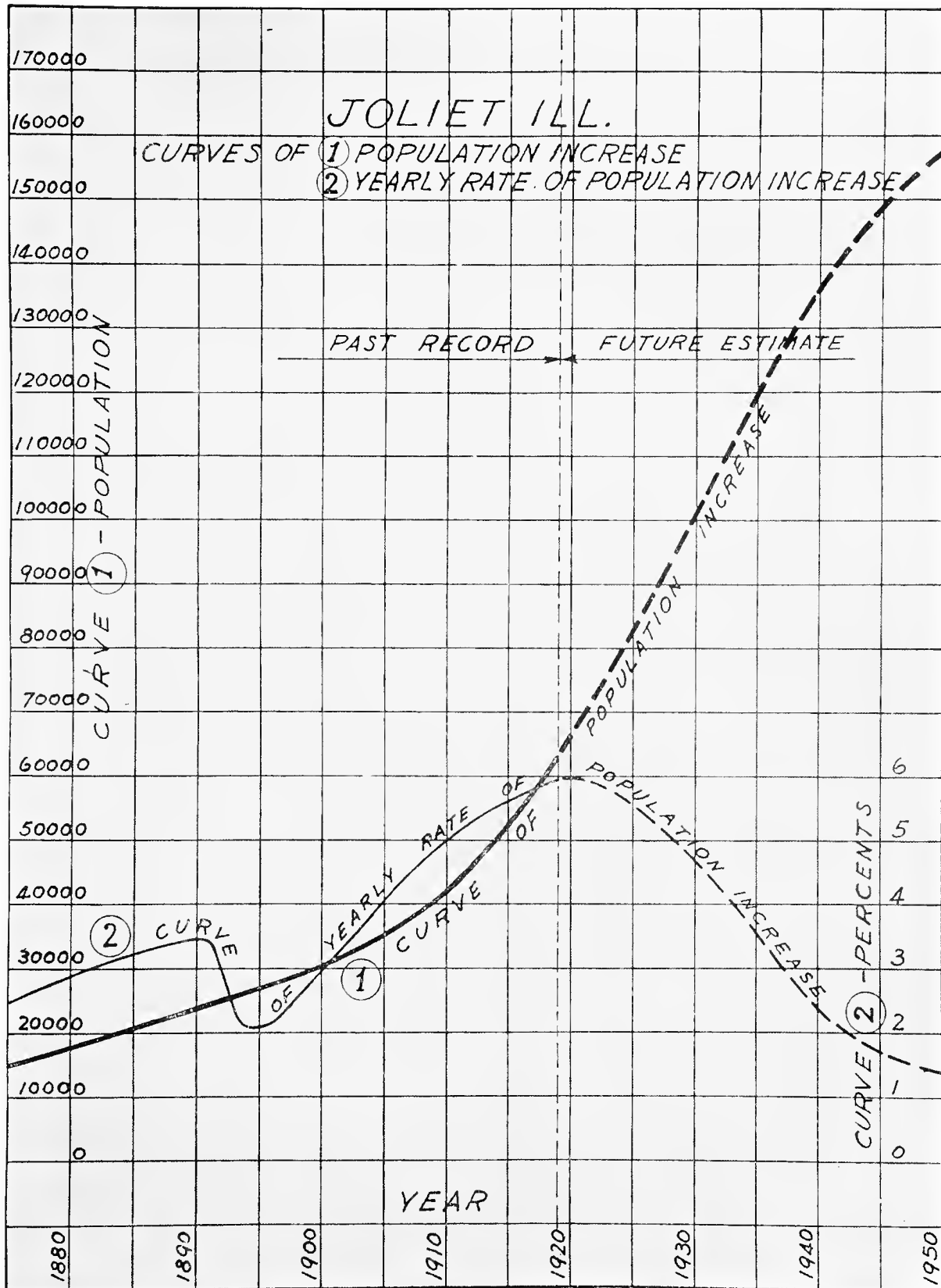
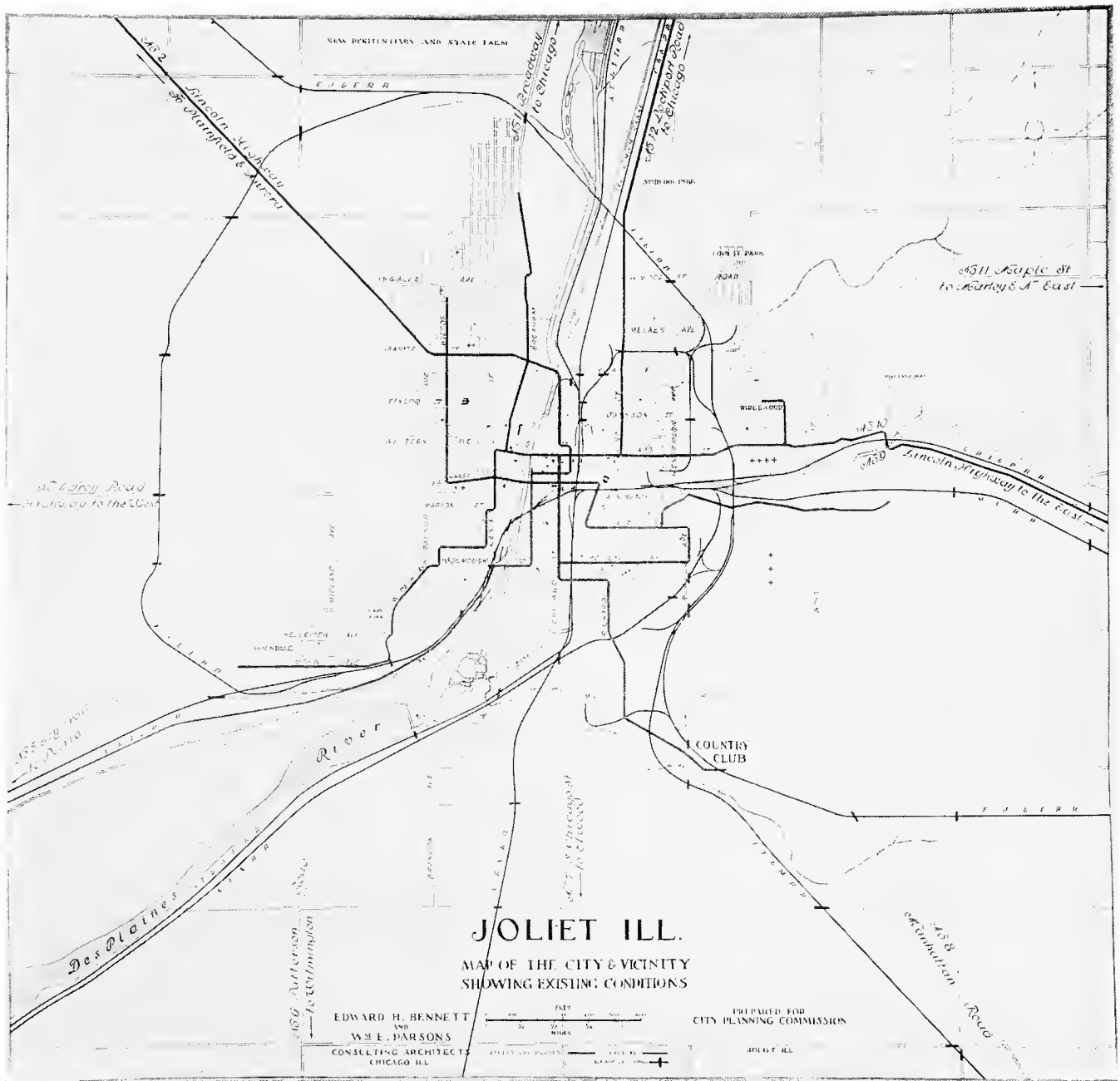


CHART SHOWING GROWTH IN POPULATION.
Past Record and Future Estimate.



MAP OF THE CITY AND VICINITY SHOWING EXISTING CONDITIONS.

This map refers to present street circulation. Note the lack of direct and convenient thoroughfares to the north and southeast; the lack of through north and south lines in the eastern part of the City and the lack of east and west lines north of the City. The Plan of Joliet safeguards the future by providing the main arteries required by the City's expansion.

THE STREET SYSTEM

“TRANSPORTATION is the essence of City Planning. Rapid, frequent and cheap means of communication between home and workshop, one workshop with another, and workshop and home, are indispensable to community efficiency. The chief agency of transportation is the street system. Every other agency depends upon it, foot travel, vehicular travel, surface, subway and elevated service, the telephone and the telegraph, sewers and conduits—all are controlled, determined, dictated by the street system.”

The main streets and highways are and have always been the principal features of the plans of towns and they will continue to make the frame to which the other facilities of any successful town plan are to be fitted. The success of a city has largely depended on facilities for traffic. A diagrammatic indication of any town will show a central area with radiating lines extending beyond its limits and subsidiary lines crossing them and forming circuits which are utilized in reducing congestion of the central area. This last class of arteries are often broken, however, because their need is not anticipated. It is the aim of this plan to record these main streets, both radials and belt lines.

In any city certain streets tend to become major arteries because they are the ones which pass through obstacles. In Joliet this is true especially because of the river with its limited number of bridges, the railroads which penetrate the heart of the city and the Outer Belt Line of the E., J. & E. Railroad.

Growth of the city will throw an increasing burden upon these arteries; they must be extended and opened up where they are blocked by railroads. Future needs will demand the widening of certain streets.

The railroads and the river cut the city into seven sections and are largely the cause of the lack of order and continuity in the street system. They will be responsible for serious inconvenience in the future. Provision is therefore made for (a) the extension of streets by means of subways and elevation of the tracks, also by bridges across the river, (b) control of the development of industry along railroads where they intersect residence areas, and (c) the elimination of unnecessary rights-of-way. By these means business streets may be extended, residential areas given more continuity and industrial areas made more concentrated, and consequently more economical in their operation.

In theory the street system of Joliet embraces the north and south lines generally paralleling the river; the east and west lines crossing the river; of the two the former being the more important because the river, the railroads and consequently their adjacent industries lie generally in a north and south direction.

A new era of road improvement is having its beginning and the progressive community must be alive to the possibilities. Highway freight tonnage is rapidly increasing and like aerial mail service will be available to the community that offers the facilities.

It should not be necessary to amplify the statement that it is economical to proceed at once with ways and means for bringing about improvements. Where streets must be widened a set-back line should be established now. Parks and playgrounds will soon be needed and the places for them can be determined with accuracy. The ground has less value now than when it will be the center of a built-up housing area. Rights-of-way for new streets which will be costly in a decade may in many cases be acquired without cost. Where street grades are unsatisfactory a proposed change should now be made a matter of record and the improvement carried out with little delay. One of the principal problems is to provide space for free circulation in streets having car lines, against the time when double tracking takes place.

Car Line Streets

Most of the through streets have surface lines. When double tracking is done there will not be sufficient room on any street except Chicago Street for a vehicle to pass a street car when there is another vehicle standing at the curb. A roadway on which there are tracks should be 20' wider than one without, the vehicular traffic being equal.

To meet this condition for the present and future, careful consideration having first been given to possible extension of street transportation into streets not now occupied by car lines, three schemes have been introduced.

1. Where two main streets each 66' wide, from lot-line to lot-line, one of which has or may have a car line, are parallel for a considerable distance at approximately the same grades and where neither is subject to intensive local traffic, widening is not considered necessary since by proper routing of traffic congestion is not likely to occur. Examples of this condition are Collins-Union Streets from Fourth Avenue to Ward Avenue (with the proposed subway connecting Collins and Union Streets) and its parallel street, Herkimer-Richards Streets, extending between the same points.

2. The second condition is that under which a through street less than 84' in width from lot-line to lot-line, having a car line at the present time or likely to have in the future and not paralleled for any considerable distance by a continuous thoroughfare at the same elevation or with frequent cross streets connecting them. Here widening of the street is recommended as the safest and most practical solution. Examples of this condition are Collins Street north from Ward Avenue; Richards Street south from Fourth Avenue; Granite Street and McDonough Street.

Another consideration applicable to proposed widening of Chicago Street south from Washington Street and Cass Street east from Scott Street is the great importance of these arteries for through traffic and for local traffic originating there and which will increase with the future intensive industrial and business occupancy of adjacent areas immediately to the east in the case of Chicago Street and to the south in the case of Cass Street. Cass Street will also carry most of the through traffic of the Lincoln Highway.

The procedure for accomplishing the widening of a street is dealt with under "Street Widening."

3. The third condition is that dealing with existing outlying arteries and proposed outlying arteries which carry or will ultimately carry street

transportation. In all cases of this nature it is recommended that the street be made not less than 120 feet wide from lot-line to lot-line, with provision for a neutral zone, preferably in the center, for car tracks. The cost of double track construction in the neutral strip, rock ballasted and planted, is considerably less than the cost of rigid type construction with the necessary paving between tracks. This saving in construction will go a long way toward paying for the additional widening. Other considerations are added safety, improved public transportation service and greatly reduced rolling stock and roadway maintenance charges. Streets of this class are Richards Street south from Hickory Creek; Chicago Street south from Hickory Creek; Washington Street east from Hickory Creek; Granite Street west from the cemetery; West Jefferson Street west from Raynor Avenue; also all outlying, existing and proposed streets as indicated on the "Plan of the City and Vicinity."

It is needless to add that if the free wheel vehicle should supersede the surface car as a carrier the neutral zone will form a very desirable park strip.

The street plan if viewed from the standpoint of passenger transportation has a direct bearing on the proper development of housing areas, and their connection with industrial centers, the control of retail business development, particularly in outlying areas and the location of park and recreation centers.

A study of the "Plan of the City and Vicinity Showing Proposed Improvements" in conjunction with the "General Zoning Plan" will show the value of the proposed diagonals and circuits. The large north industrial areas lying on both sides of the river should be connected, each with the industrial housing areas to the east and the west.

If these areas are properly connected with the eastern industrial area and the latter opened to the south an important line of communication would be established over existing streets, new connections and new viaducts and bridges as indicated on the "Plan of the City and Vicinity Showing Proposed Improvements." These are—Number 24: A proposed bridge and viaduct at Stirling Park. No. 22: An extension of the road along the top of the bluff bordering an area having excellent possibilities for housing development. This carried south along the east line of the E., J. & E. Yard as a wide thoroughfare. No. 18: A connection through a subway at Benton Street to Cass Street. No. 15: The above connection continued south over the tracks and Hickory Creek and along the right-of-way of the old Quarry Switch tracks developed into a broad highway and westward to and eventually across the Desplaines River at South Street.

When the areas through which this circuit would pass have been built up (and properly placed radials will govern largely this development), street transportation along the line will be profitable and access to any industrial zone from all housing areas will greatly improve working and living conditions.

The three large outlying housing areas will develop rapidly with the aid of well laid out highways, having ample provision for safe transportation. The need for these lines is most evident in the northeast and southeast.

Widths of Major Streets

In determining widths of highways in outlying districts to accommodate future traffic, improvements should be made so as to admit of expansion of roadways without disturbing trees and walks. For immediate needs arterial roadway widths should be 36' without car tracks and 54' with a double line of tracks. These widths are for the roadway itself, and do not refer to the width from lot-line to lot-line.

Sidewalks in the retail business district should be at least 12' wide. In residence areas the space should be of a like width or wider with walks 6' to 8' wide, set well back from the roadway.

Block Lengths

For all future subdivision plans the blocks along the main thoroughfares should be 600' long or longer where practicable in order that there will not be too frequent interruptions to through traffic. Offsets for minor streets, instead of carrying them directly across main arteries are not objectionable. They will add to the value of the highway for through traffic and reduce the unnecessary use of minor streets, both of which conditions are important in determining types of pavement.

Street Widenings

The widening of streets within the built-up area presents quite a dilemma. There is no doubt of the future necessity of the widenings indicated, for 66 feet is insufficient width for the traffic demands on a major street. If no provision is made for widening until the need is urgent, by that time expensive permanent improvements will have made the widening prohibitive.

If on the other hand widening is accomplished now, prior to the actual need, the burden of cost falls heavily on the present generation.

To this problem the following procedure is offered: First, establish by ordinance the desired street width by means of a new building line. As permits for new buildings are given, require that they be set back to the new line, the city compensating the property owner for the value of the land. Then, if the street widening is not to be effected immediately the city may lease the land to the owner for a term of years and permit him to extend his store front or to place thereon a similar temporary improvement. When the time comes for the actual widening there will be no valuable improvements in the way, and the temporary portions can be readily removed. By this method the cost of widening is distributed over many years and most of the cost is deferred to the time when the street widening is to be accomplished. Those streets recommended to be widened by this process are indicated on the "General Plan of the City Showing Proposed Improvements."

Minor Streets

Another reason for classifying streets is that great economies can be effected in the case of road widths of minor streets. Very often these are made unnecessarily wide, resulting in high initial paving cost and expense for maintenance and cleaning. The width of roadways in minor residence streets need not be more than twenty feet if the intersections are provided with turns of ample curvature.

Grades

There are many cases in Joliet where street grades are objectionable. Most of these can be corrected. This phase of the street circulation problem should be made the subject of a careful survey for the purpose of improving existing street grades and fixing the grades of proposed lines of communication.

When viewed in the light of cost of trucking it is evident that great economies are possible with reduced grades. Examples of grades which should be corrected are found on Bridge Street, Granite and Ruby Streets, and Broadway where the street level between Western Avenue and Division Street should be lowered.

Recommendations on Streets

The major recommendations are as follows:

NORTH AND SOUTH LINES: Widen Chicago Street between Washington Street to the C. & A. R. R. crossing to its full width of 80 feet. Combined with this, form a diagonal from the foot of the McDonough Street Bridge to the Chicago Street Bridge at Hickory Creek so that Ottawa, Joliet and Desplaines Streets may function together by means of this diagonal converging to the Hickory Creek Bridge and C. & A. subway.

Extend Desplaines Street north so as to form a marginal street along the river as far as Columbia Street, passing the proposed Civic Center between Jefferson and Cass Streets.

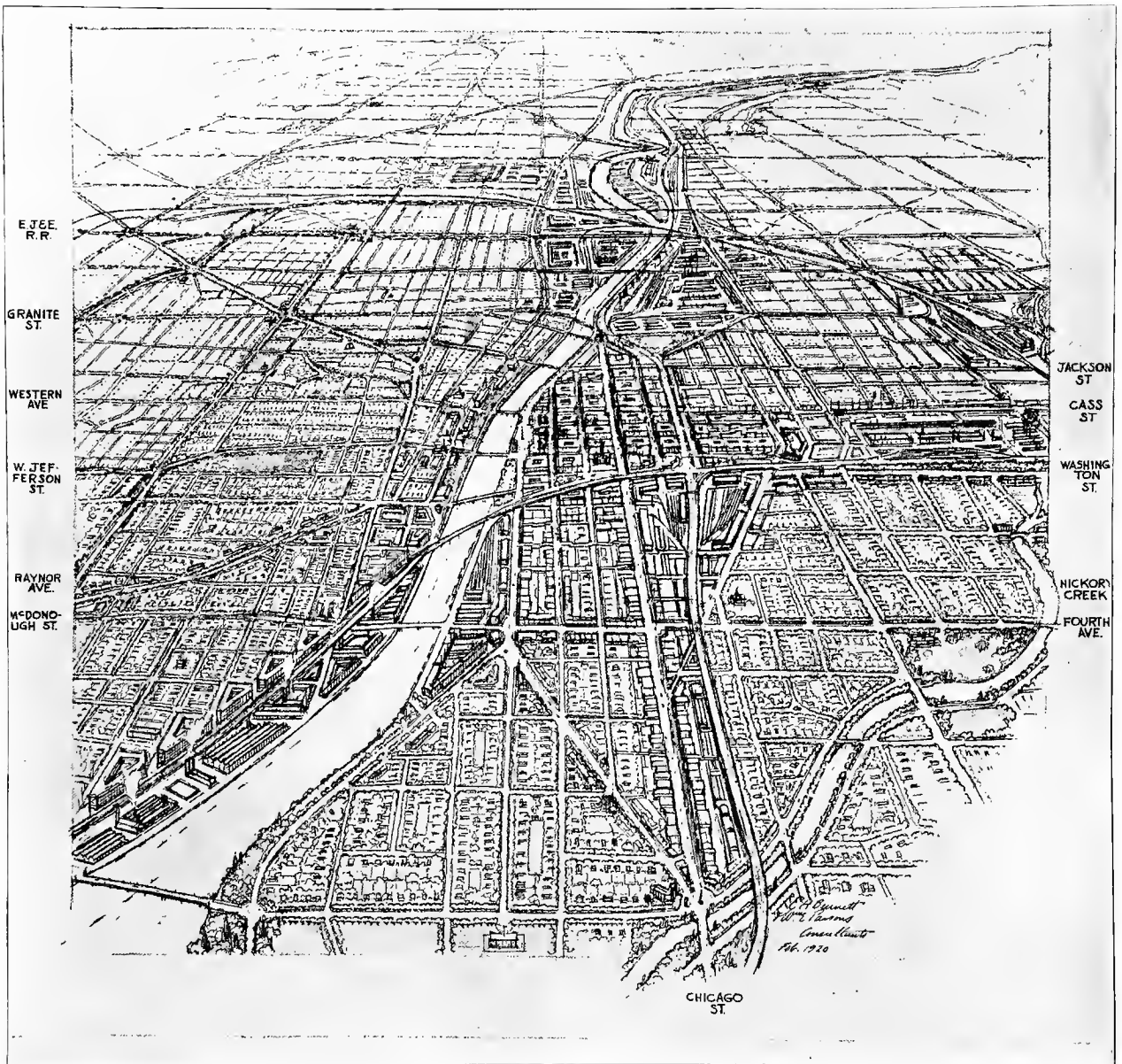
Form a diagonal line from the subway at Ohio Street to Collins Street and Ward Avenue, in order that convenient diversion may be found around the industrial plants of the Illinois Steel Company and that Collins Street and Herkimer Street may function together. Widen and extend Raynor Avenue.

EAST AND WEST LINES: Provide for future bridges and crossings at Theodore Avenue and also at Ingalls Avenue (Woodruff Road). Extend Taylor Street and Western Avenue to the west. Extend Benton Street east through a subway under the E., J. & E. R. R. to intersect with Jackson Street.

CIRCUITS: Develop a parkway along Hickory Creek utilizing existing streets where possible. Utilize the quarry switches and sidings between Richards Street and Washington Street to form an outer circuit which eventually should be extended north across Hickory Creek and the Rock Island R. R. to connect with Stevens Avenue, thus forming a valuable connection between the industrial plants and the residence section.

RADIALS: Provide for the future extension of West Park Avenue to Marion Street and for a bridge across the river to Lafayette Street and the Union Depot.

Form a diagonal from the intersection of Rowell and Fourth Avenues, passing in a southeast direction and connecting with the Manhattan Road.



GENERAL BIRD'S-EYE VIEW VISUALIZING THE FUTURE CITY.



GENERAL PLAN OF THE CITY, SHOWING PROPOSED IMPROVEMENTS.

VARIOUS IMPROVEMENTS: Following is a detailed schedule of recommended improvements in street circulation and extension into the outlying areas. The numbers correspond to those marked on the "Plan of the City and Vicinity Showing Proposed Improvements."

1. Extension of Desplaines Street northward from Cass Street into Mill Street to Columbia Street along the river in conjunction with the water-front City Center scheme. This recommendation includes raising the grade of Desplaines Street south of Jefferson Street when the elevation of the C., R. I. & P. R. R. tracks makes it possible.

2. The construction of a subway in Joliet Street under the C., R. I. & P. R. R. tracks, the removal of the freight yard and the extension of Lafayette Street northeastward paralleling the tracks to Chicago Street.

3. The construction of a subway in Van Buren Street under the C. & A. R. R. and Santa Fe R. R. tracks and the re-location of the street through the high school property.

4. Construction of a subway in Benton Street under the tracks now elevated and the elevation or removal of the tracks of the yard. The freight terminal problem is discussed under railroads.

5. The development of a new diagonal from Ohio Street and the C. & A. tracks to Collins Street at Ward Avenue. This proposal is linked with the re-location and elevation of the C. & A. line and the E., J. & E., connections and removal of all present tracks south of Columbia Street and lengthening subways at Jackson Street, Ohio Street and Columbia Street.

6. Opening short diagonal parallel to the Santa Fe right-of-way from Ohio Street subway incident to the re-arrangement of the C. & A. main line and the removal of the switch track in Mill Street.

7. Widening and extending Bridge Street between Center Street and Plainfield Avenue and improving grades in Bridge Street east from Center Street.

8. The development of Bluff Street as a parkway in conjunction with the proposed waterway plan. This is referred to under Parks.

9. Extending West Park Avenue northeast to the intersection of Marion Street and Pleasant Street. This line would provide better circulation within that area north of Morgan and west of Pleasant Streets and provide a cut-off for street transportation.

10. Connecting Broadway with Bluff Street near Marion Street by means of a short diagonal and improving grades in co-ordination with the proposed change in grade of Bluff Street. This should be schemed as a fitting approach to a future bridge across the Desplaines to Lafayette Street.

11. The development of a diagonal street in extension northeastward from McKinley Avenue to McDonough Street at Desplaines Street. This recommendation is coupled with the proposed waterway scheme and an extensive freight interchange plan.

12. Opening a new street from Chicago Street at Hickory Creek to McDonough Street and Desplaines Street. The usefulness of the streets paralleling Chicago Street will be improved and the proposed freight interchange will be served by this diagonal.

13. Extending Gardner Street northward to Eastern Avenue. A bridge across Hickory Creek in Gardner Street is recommended and with the extension another street to the south will be provided.

14. Improvement of Hickory Creek from Chicago Street to Washington Street by parking its banks and completing a roadway along the east side, the construction of a new bridge across Hickory Creek in Washington Street and the widening and realigning of the Henderson Avenue subway.

15. Extending the street from the proposed subway in Benton Street under the tracks of the E., J. & E. and developing a broad thoroughfare to the south along the right-of-way of the old quarry tracks, continuing this highway toward the west to and across Hickory Creek along South Street and eventually connecting with Railroad Street at a point near Illinois Street by means of a bridge across the Desplaines River to complete the inner circuit. (See also 18-27.)

16. Extending Brandon Road southeastward and eastward to the highway along the south line of the Joliet Country Club property, the extension of a road eastward from Patterson Road along Sugar Creek to Mills Road and the co-operative development of the south housing zone.

17. Development of the southeastern residence district by co-operative subdivision and opening a direct connection with Fourth Avenue at Rowell Avenue planned as a wide thoroughfare and passing under the E., J. & E. tracks.

18. Construction of subway in Benton Street under the E., J. & E. tracks and the extension of Benton Street easterly to Jackson Street, also opening a new street paralleling the tracks to connect Maple Street with Cass Street and the construction of a subway in the latter. In order to accomplish this plan it is necessary to elevate the tracks of the E., J. & E. R. R. south from Jackson Street. A grade separation at the C., R. I. & P. crossing will thus be accomplished and a street subway will be possible in Washington Street. If a physical connection of the E., J. & E. with the Michigan Central is to be maintained it might be desirable to elevate the tracks of the latter also.

19. The improvement of Cass Street east from the proposed E., J. & E. subway as a fine boulevard leading to Highland Park and to Pilcher Park, and the connection east of the cemetery south across the Creek to Briggs Street and Washington Street.

20. Improving Henderson Avenue and Ward Avenue and connecting them with Meeker Avenue at Cedar Avenue by a direct line across the throat of the E., J. & E. yard, widening and improving Cedar Avenue to open adequate communication with the high suburban housing area north-east of the E., J. & E. R. R. (See also 22.)

21. Co-operative planning of the northeast housing district in connection with adequate street connections of Forest Park with the city. (See 20, 22.)

22. Opening a new street along the top of the ridge from Lockport Road to Woodruff Road to connect with Cedar Avenue and to extend southeast to the road east of the E., J. & E. yard. This will be linked with 15, 18 and 24 to form a continuous line of communication.

23. Connection across the Desplaines River of Ingalls Avenue with Woodruff Road. It is thought that Theodore Avenue should be extended

across the Desplaines River before this improvement is attempted. (See 24.)

24. Connecting Theodore Avenue across the Desplaines River to Lockport Road near its junction with proposed street. (See also 22.)

25. The development of an outer circuit on the west side generally following the E., J. & E. loop but at a distance from it of several hundred feet where practicable; and the ultimate extension of this circuit to Stirling Park, and through the northeast housing area to Pileher Park.

26. Developing the west side by means of co-operative subdividing for residences and connecting with West Park. The plan should include playgrounds, an aviation field and a park to the north.

27. Connecting South Raynor Avenue with Railroad Street along the edge of the Quarry Cliff and acquiring a broad strip along the Cliff for parking—to be developed as a parkway. It is thought that a part of the quarry will eventually be filled and used for housing, while that area nearest the tracks being at the track level may be developed as industrial territory.

These two photographs give a splendid idea of the way the great boulevards of Paris form radials, centering in attractive circles. Such radials are planned for Joliet.



The upper photograph shows Theatre Francais Place and Opera Avenue, taken from the Louvre Hotel.

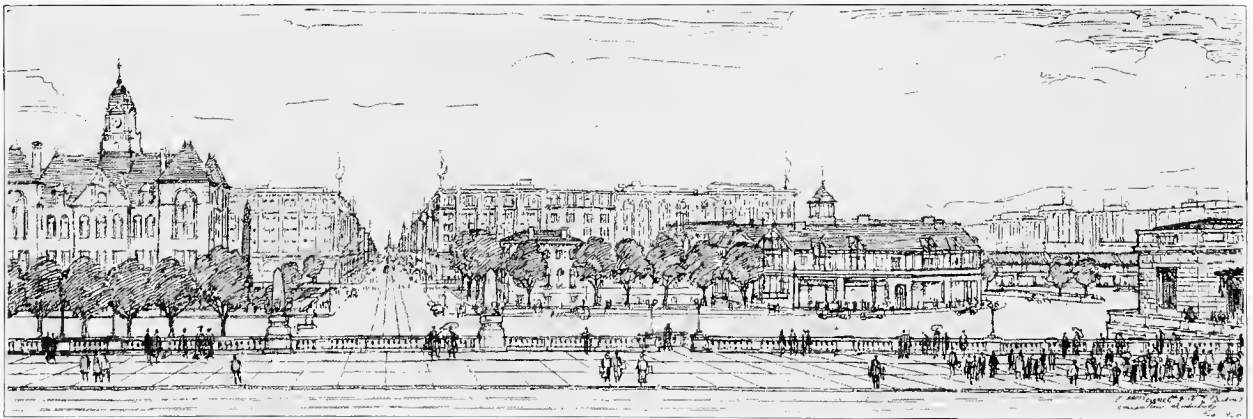
The lower picture—taken from the Arc de Triomphe—gives an interesting view of Bois de Boulogne and Grande Armee Avenues, two of the great thoroughfares of Paris.

RAILROADS AND THE CITY PLAN

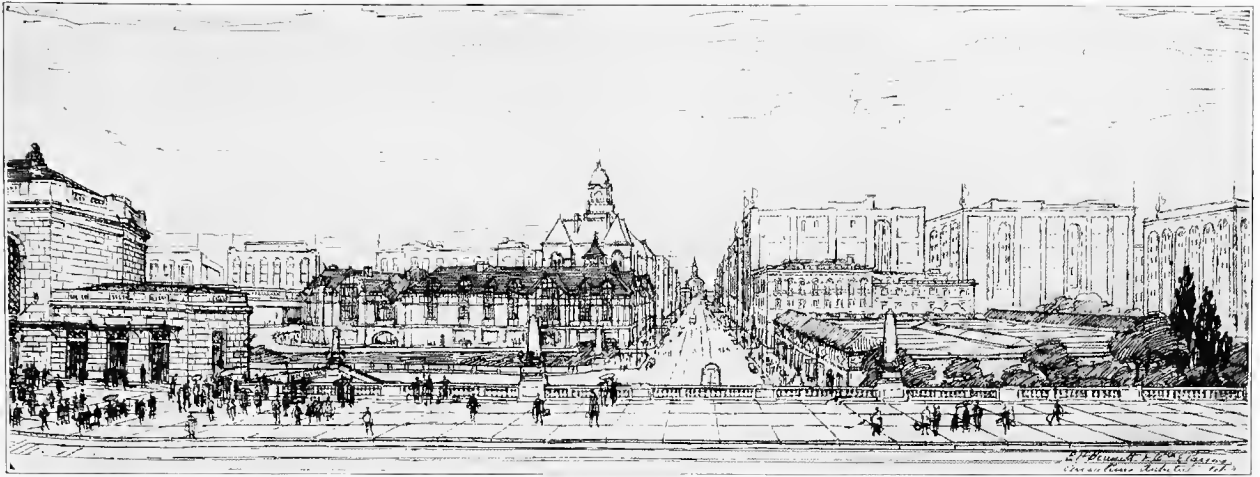
TO the number and importance of the railway systems entering Joliet is largely due its position as an industrial center. As to their effect on the city plan, it is evident that the main line tracks cut the city into four parts, crossing as they do the center of the city in both the east and west and north and south directions. Already the unfortunate features of this condition have been minimized by track elevation in the business district. In this respect Joliet is further advanced than any city of its size in the central west.

The re-location and track elevation of the Chicago & Alton toward the north, the elevation of the Chicago, Rock Island & Pacific toward the west and the Atchison, Topeka & Santa Fe toward the south, if provided with subways at the important street intersections will promote the free expansion of the city. (See "Map of the City and Vicinity Showing Existing Conditions" for railroad lines and the existing street crossings at grade.)

The condition resulting from the E., J. & E. main line and also its belt line will require early attention, as this already forms a barrier to the expansion eastward at several dangerous crossings. Grade separation at Cass Street, Benton Street and Washington Street will be imperative. On the assumption that it will be desirable to avoid the crossing of the C., R. I. & P. and E., J. & E. R. R. at the same grade and that the latter should cross the former at a higher level, it is believed that the portion of the E., J. & E. R. R. between Washington Street and Jackson Street should be elevated so as to permit the passing of these and the intervening streets through subways. The C., R. I. & P. R. R. switch-track paralleling Henderson Avenue, extending from the E., J. & E. R. R. yards to the yards south of Cass Street, should be elevated—or re-located by direct east and west connection with the E., J. & E. R. R.



VIEW FROM THE UNION DEPOT—Looking North on Chicago Street, Showing the Opportunity for Development.



VIEW FROM THE UNION DEPOT—Looking West on Jefferson Street, Showing the Opportunity for Similar Developments.

A revision of the connection between the E., J. & E. R. R. and the C. & A. R. R. lying between Jackson Street and Ward Avenue is recommended along the lines of the suggestion shown on the plan. This will permit the removal of the tracks extending northeasterly from Ohio Street and the use of this line for an important artery as described under the subject of Streets.

It is also recommended that several of the switch tracks leading to the old quarries southeast of the city be removed and the right-of-way used for a wide street.

Freight Terminals

At present each of the railroads has a separate freight house and team tracks. In line with the present effort to co-ordinate railroad services, particularly their terminals, it is urged that early consideration be given to this subject.

The present freight house of both the C., R. I. & P. R. R. and the A., T. & S. Fe R. R. form obstacles in the way of expansion of the business center and are evidently inadequate. Their removal to the south in the case of the A., T. & S. Fe and to either the south or east in the case of the C., R. I. & P. R. R. is recommended as indicated in the area marked "B" on the "General Plan of the City" and in the area containing the existing freight yards and terminals lying east of Collins Street and south of Cass Street.

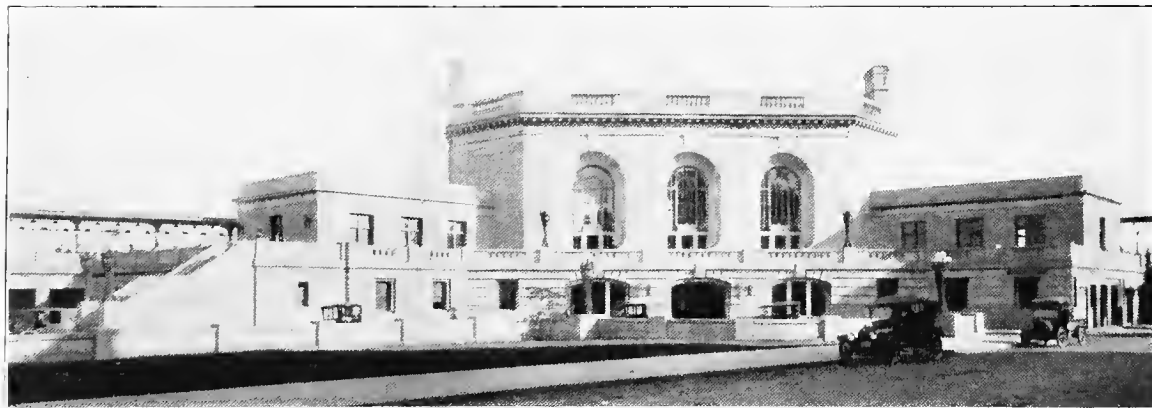
Proposed Freight Interchange

At the time when the Lakes-to-Gulf Waterway is realized an adequate freight interchange available to all lines should be developed. The site recommended is that lying south of the right-of-way of the C., R. I. & P.

R. R. and west of Desplaines Street. This area should be so planned as to offer facilities for a local retail and wholesale market, general and cold storage, barge to rail direct interchange, barge to truck interchange and possibly a small general team yard. The difference between the proposed elevation of the river and that of Desplaines Street is such that a ramp in the latter should be provided leading to the wharf level, which should be also the level of the tracks. The plan should be so schemed that a rail extension may later be carried across McDonough Street on a viaduct to provide for future expansion of this terminal into the area to the south.

Union Passenger Depot

The combination of the three main passenger lines has already been achieved in a remarkably convenient and architecturally fine manner. Altogether it makes a very agreeable impression at the city entrance. The platforms and depot approaches should be further developed by means of parking, planting and balustrades and by the removal of unsightly obstacles, particularly the old buildings near the corner of Scott and Washington Streets and those south of the Court House Square as indicated on the Plan of the Commercial and Civic Center.



THE UNION DEPOT. JOLIET.

This station — one of the finest to be found anywhere in a city the size of Joliet — is now surrounded, in part, by undesirable buildings. Under the City Plan these will be removed and the approaches to the station greatly beautified.

ZONING

Zoning is Protection for the Poor Man

IT is worth while to remember that a zoning bill is a poor man's bill. The rich man can often protect himself against various forms of nuisances by legal action. But the poor man can not indulge in the luxury of a law-suit; he can not afford to pay a lawyer to prevent a garage being built next to him, and he has no recourse when a factory hums about him and reduces the light and air circulation about his home.

Further, to a great extent, and in the mass, the industrial worker must accept the kind of a house the public permits operative builders to erect for him. If the public does not require the builder to leave a fair percentage of his lot open for fresh air and sunshine, the workman, in the mass, must take what there is available.—Andrew Wright Crawford.

ZONING

CITY planning includes the layout and control of everything of a public nature, including streets, blocks, parks, public buildings and transportation and terminal systems. The control of the development of private property which has been estimated to occupy more than two-thirds of the entire area of a city is also of great importance, and no plan can be complete or effective without it. Correspondingly the result of such control and direction will react most favorably on all of the public utilities. A city may suffer a tremendous loss by the inflexibility of its street system. The street system is bound up with the type of occupancy of the ground. A city's park system may be of enormous actual real estate value; its value as a park system depends largely on the location of the parks and parkways with regard to the character of occupancy of the land, whether it be business or residential.

The city's sewerage, lighting and water facilities all have a distinct and direct relationship to this same occupancy. Trans-

portation itself unless worked out in connection with a recognized plan of control by districting or zoning will fall short of its requirements and cannot help but be uneconomical.

In the large cities transportation facilities are in some cases provided up to the maximum capacity of the streets, beyond which they cannot go. Obviously unless the density per acre of the population is controlled and the population distributed the time will come when transportation can no longer meet the requirements of the cities.

The importance of Districting or Zoning on the public health in its relation to the provision of light and air is apparent without argument. In many areas a proper Zoning Plan will be based on the requisite of securing for the public wholesome conditions of living.

Last, but not least, is the matter of values. The restriction of certain classes of buildings to certain sections of the city is essential. There are striking examples in our larger cities of the decline of prop-



SCENE ON RICHARDS STREET—Zoning Effectively Preserves Residence Sections Such as This from Deterioration.



HOUSING DEVELOPMENT AT PERRYVILLE, MD.—Planned According to the Standards of
the Bureau of Housing, Department of Labor.

Mann & Mac Neille, Architects.

erty values due to the invasion of residential districts by industry and of retail business districts by loft buildings and light industry. It can be authoritatively stated that Districting will stabilize real estate values in all sections of the City of Joliet, and that land values will be higher and the taxing power greater than if such restrictions were not imposed.

The power of a city to limit building heights, to eliminate retail business operation in certain localities, to prohibit the development of industrial establishments within certain zones, to compel the erection of fireproof buildings within certain given areas, to allow the occupancy only of a percentage of the building lot with a building, have all been exercised in various parts of the country. Furthermore, definite plans for Districting already exist in some of our most important cities and the recognition of the principle of Zoning is becoming universal.

The fundamental consideration is that of separation of heavy industry and residence. A plan tentatively fixing the boundaries of the various areas has been made and is submitted with this report. It should be made the subject of special study in detail as soon as the authorization has been received by legislative action for cities to establish Districts; or lacking this action such other steps as are possible or may be found expedient should be taken to promote as nearly as possible the recognition of this plan. The plan submitted deals broadly with the subject.

In addition to the general recommendations it should be attempted to establish as follows:

1. Residential districts in which only one and two family houses are to be built.
2. Areas in which retail business and light industry, such as laundries and public garages, will be permitted. These



SCENE ON WESTERN AVENUE—Zoning Prevents the Intrusion of Business or Industry in Residence Sections.

areas may be small or scattered and even located within the hearts of certain otherwise restricted residential areas.

3. Areas in which multiple family dwellings may be built. The necessary ordinances when drawn will be found to protect and benefit all residential areas. In an industrial community industry and housing must be considered as closely related and not as separate problems. The plan presented, while providing for the consolidation, protection and development of housing areas, makes provision for convenience of access of the workers to the industrial sections of the city.

Limitation of industrial areas is particularly necessary in Joliet, because industry is mostly that of iron and steel products. An absolute limitation between the mills and the homes is therefore demanded.

Fortunately, the railway lines passing through the city are fairly well grouped, due to topographical conditions. This has

resulted favorably in a corresponding grouping of industries. There are now three such groups in the form of sectors extending toward the north, the east and southwest.

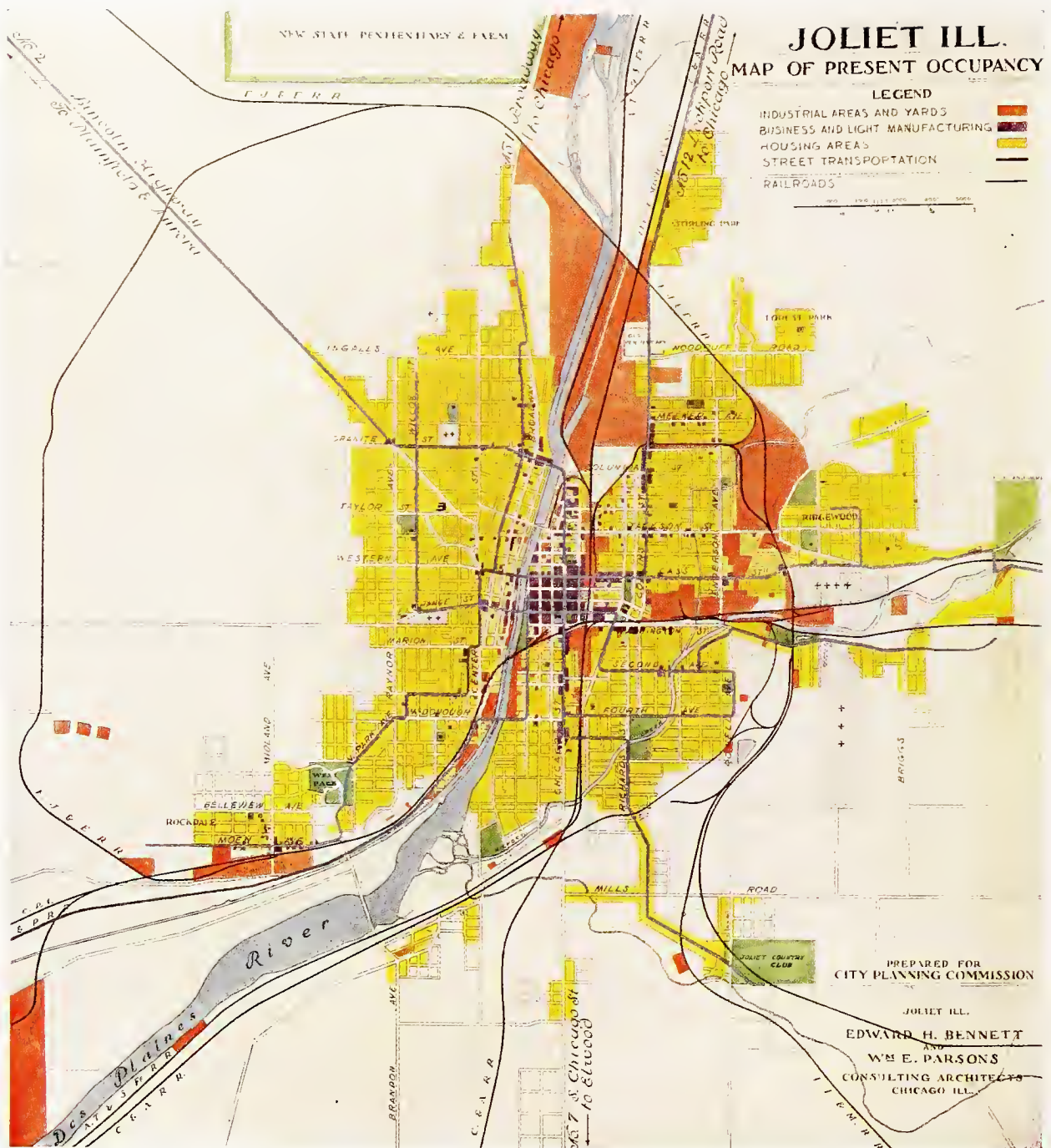
It is proposed to establish definite limitations of these industrial sectors along their sides, but to allow for free outward extension.

THE NORTH INDUSTRIAL SECTOR lies on both sides of the Drainage Canal. Its natural limit on the west is the high land along Broadway and on the east the corresponding high land east of the E., J. & E. R. R. On the south, Columbia Street forms the limit to manufacturing. The triangle between the railroad lines may become a public park.

East of Collins Street there now exists a poor class of houses. This area should be properly developed by improving street circulation and by imposing definite restrictions as regards retail business and housing construction.

ZONING MAPS

Conditions, Present and Proposed

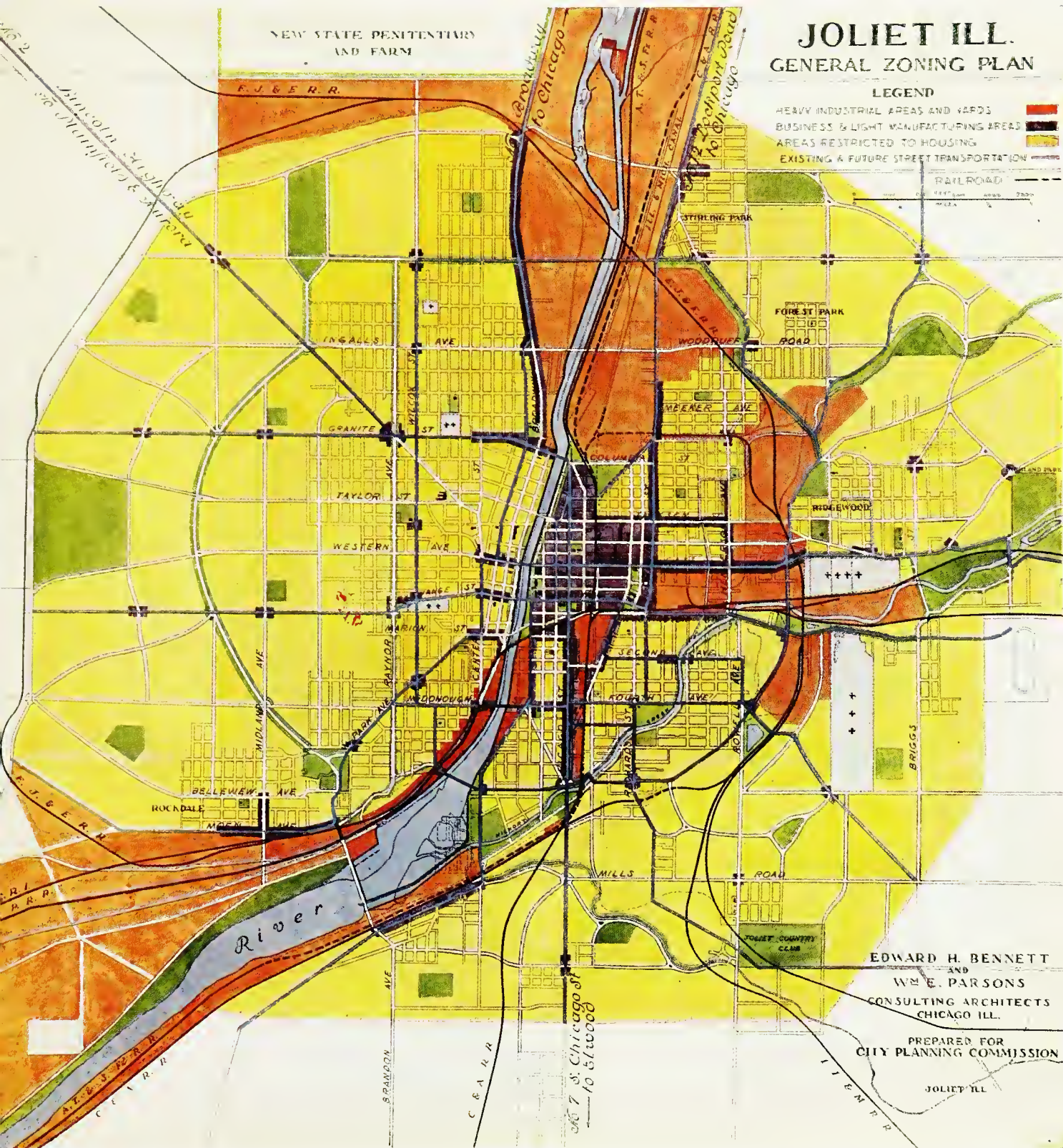


MAP OF PRESENT OCCUPANCY.

The areas now used by heavy industry (red) are generally the low ground adjacent to the railroads. The business and light industrial (purple) areas occupy the center and extend along the street car lines (blue) into the residential sections (yellow). As the business and light industrial areas scatter along the residential streets, as shown by the map, they cause unnecessary noise and confusion and are generally detrimental.

NEW STATE PENITENTIARY
AND FARM

HEAVY INDUSTRIAL AREAS AND YARDS
BUSINESS & LIGHT MANUFACTURING AREAS
AREAS RESTRICTED TO HOUSING
EXISTING & FUTURE STREET TRANSPORTATION



The areas now used by industry, business and for residential purposes, as revealed in the Present Occupancy Map, where not in conflict with recognized zoning principles, are extended and developed in this plan. Heavy industry (red) is limited to the low ground adjacent to the railroads, where ample space is provided for future needs. Business (purple) is not permitted to intrude in residential streets, but provision for local needs is made along street car lines and at important street intersections. Present conditions need not be injuriously disturbed as a zoning ordinance need not be retroactive.



RUE DE RIVOLI AND THE GARDEN OF THE TUILERIES, PARIS, FRANCE.

This wonderful thoroughfare is one of the world's best examples of the result of zoning. Here the height of the buildings is made uniform by law and zoning regulations have brought uniformity of occupancy.

The north industrial zone has admirable transportation facilities, the Santa Fe and the Chicago & Alton R. R. with the E., J. & E. Belt Line serving all the other railroads.

The Drainage Canal also offers transportation possibilities.

Connected with this sector are the extensive yards of the E., J. & E. lying east of Henderson Avenue.

THE EAST ZONE lies largely east of Henderson Avenue but with an extension west to Collins Street south of Cass Street and is served by the Rock Island R. R., Michigan Central R. R. and E., J. & E. R. R. The gravel fields east of Rowell Avenue belong to this area.

THE SOUTHWESTERN INDUSTRIAL ZONE includes the larger sector between Moen Avenue and the Patterson Road. It is served by the Rock Island R. R. west of the Desplaines River and by the Santa Fe and Chicago and Alton Railroads east of the river. It is also served by the E., J. & E. Belt Line. This Zone

also includes the narrow strip between the river and the Rock Island R. R. extending north to the railroad bridge.

CONVENIENT ACCESS AND MEANS OF TRANSPORTATION between the industries and homes are essential to industrial efficiency. Preferably the homes should be within walking distance of the factory, but it is also a recognized principle that each residential area be provided with means of transportation to all of the industrial areas of the city, so that the several members of any household may reach any one of the three zones where they may be employed. Therefore, a complete system of arteries linking the industrial and residential zones has been indicated. At present most of the required links are lacking, particularly those between the north industrial zone and the residential zones lying west and south-east. The connecting arteries should be of sufficient width to provide space for street cars or other means of transport.

THE BUSINESS CENTER is practically limited to the area bounded by the river and the railway lines. The width of the river together with the steep bluff are conditions which limit expansion to the west, but the opening of subways under the railroads will permit expansion to the east and south. It is interesting to note that the area between the railroads and the river is approximately the same as that of the elevated "loop" in Chicago—(about 150 acres).

Retail and local business is shown as extending along certain streets carrying surface lines. In the outlying residential zones retail stores supplying needs of the adjacent communities are suggested in groups at important street intersections. If set back from the street line, local stores arranged in this way would detract less from the appearance of residence streets than if they are allowed as at present to be spotted anywhere along the streets.

Housing

Land subdivision has an economic bearing on housing as well as upon the main circulation. The owner who contemplates subdividing acreage tracts into lots for housing should be guided by the spirit of approved housing laws. In this way he will be able to subdivide to the greatest advantage to himself and to the commun-

ity. No building lot should be narrower than 40' and lots of this type, that is for small homes, should not be deeper than 100'. If lots are laid out to conform to a housing law meeting the general standards of the Housing Bureau of the Federal Department of Labor they will be acceptable to a people alive to the need for better housing.

Street Transportation

Whether or not the surface car in present use for passenger traffic will prevail in the future, it is certain that routes over which a carrier will travel from one part of a city to another will always be required and these must be direct and wide enough to accommodate the traffic.

For the present this carrier in Joliet is the street car and the development of those highways over which they are routed and over which future extensions and connections will be routed has been generally outlined as follows:

WITHIN PRESENT BUILT-UP AREAS: The streets should be widened so that the actual roadway itself will not be less than 54' wide.

Along Proposed New Streets: These rights-of-way should be 120' wide from lot-line to lot-line so that a double track may be constructed in a neutral parked zone in the center.

BEYOND PRESENT BUILT-UP AREAS: Existing streets now serving as street car routes and existing and future streets along which by reason of their

location and direction cars will be routed should not be less than 120' wide with an unpaved right-of-way for tracks.

There are many arguments in support of this scheme, some of which have been discussed in the chapter on the Street System.

1. The track construction may be the rock ballast type costing \$18,000 to \$22,000 less per mile than rigid concrete construction. These estimates include also the saving in pavement construction along the right-of-way.

2. Greater speed and better service can be maintained. In contemplating the future of street cars one is convinced that the aim should be to reduce the interference of street car traffic with other traffic to the greatest possible degree. In this way the freedom, speed and safety of other traffic will be increased. The need also for absolute freedom from obstruction in the interest of the community served is vitally important and delays of seconds have a large money value in the operation of a street car system.

3. Cost of maintenance is obviously lower along an unpaved right-of-way than on streets.

4. Rolling stock maintenance is lower when the tracks are rock ballasted than of rigid construction. It is the solidity of the latter which causes the destruction of the track and brings about the consequent high cost of repairs to itself and the frequent renewals and repairs of rolling stock.

In connection with the recommendation for wide streets and a separate right-of-way for tracks it is of interest to note that as lines are extended into areas that are now unbuilt and in many cases not even subdivided the saving in the ultimate track construction cost alone will pay for the width in excess of 66'.

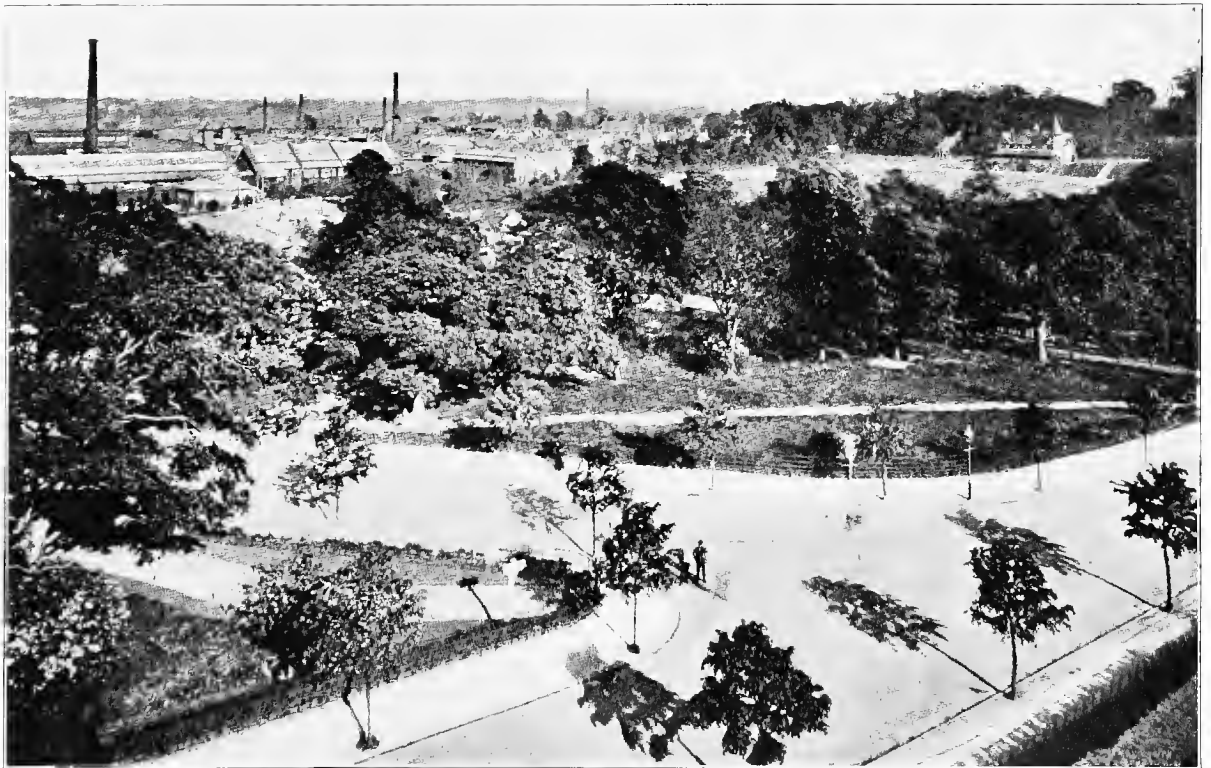
The scheme for parked right-of-way should be carried toward the center of the city as far as practicable even to the extent of widening those streets already

partly developed, such as Plainfield Avenue, Granite Street, West Jefferson Street east to the cemetery, Washington Street west to Hickory Creek and Cass Street west to the E., J. & E. tracks.

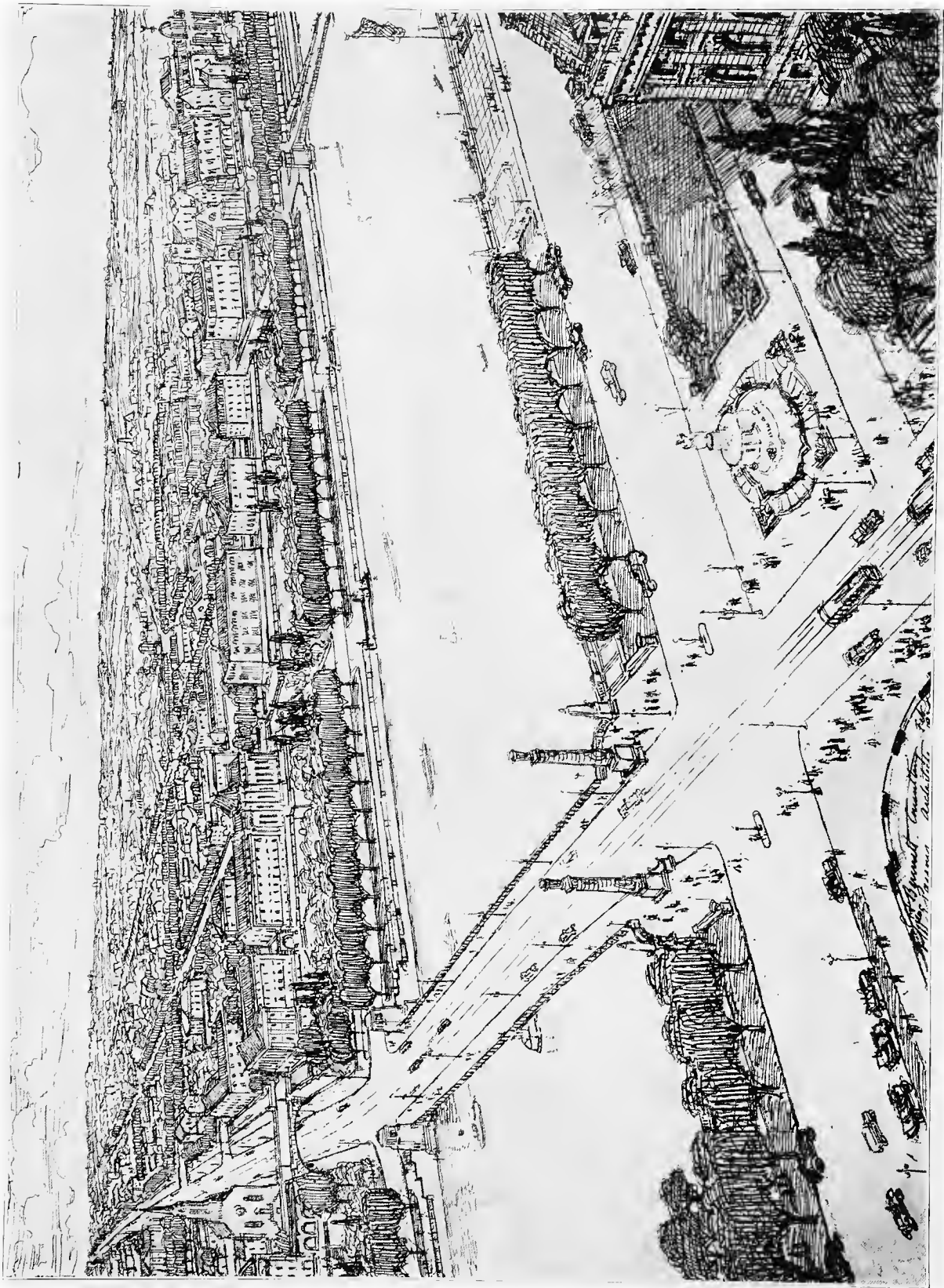
The existing and proposed street car routes are indicated on the Plan of the City and Vicinity Showing Proposed Improvements and the General Zoning Plan. The future land occupancy will be along the lines indicated on the Zoning Plan whether it is ever controlled or not and the future routing should be studied in connection with character of occupancy.

The plan of car routes has not been studied in detail but certain fundamental principles have been observed.

It is thought that a study of this problem by the Chicago & Joliet Electric Railway Company and the companies operating the interurban lines would prove of interest to the community as well as to the companies.



BOURNEVILLE (ENGLAND) FACTORY AREA, SHOWING PARK BELT—From Cadbury's "Town Planning." Orderly Arrangements, Such as These, Result from Good Planning and Zoning.



VIEW OF THE DESPLAINES RIVER AT JEFFERSON STREET SHOWING THE PROPOSED RIVER-FRONT PARKWAYS.

In the foreground is Desplaines Street which should be extended northward adjacent to the River as far as Columbia Street, forming a fine artery for light traffic because of the small number of street intersections. Across the River, Bluff Street should form a similar parkway, the strip of property between Bluff Street and the Canal as well as the Canal itself being taken over in connection with

The question of allocating the cost of developing lines of communication as streets which carry tracks or which will in the future carry tracks so that they will be wide enough is one which should be the subject of a special study. It is obvious that there should be an equitable division of the expense between the city and the companies where there is an additional expense due to added street width, the apportionment of expense to be based on franchise protection, track construction costs both preliminary and final and saving in maintenance costs.

Double Tracking: It is assumed that double tracking of all lines will eventually take place and street capacities have been determined on that basis.

Good and cheap transportation always stimulates the growth of suburbs, and the

growth of the suburb means home owners. The controlling factors in passenger transportation are good road beds and equipment and direct routes.

Car lines are constantly being extended in American cities. Generally they are the only means of public transportation service. Occasionally car routes are fed by local busses. But it is safe to say that nothing is likely to be produced in the near future that will be cheaper from the viewpoint of tractive effort than steel tire on steel rail.

If street car rights-of-way are separated from other traffic it is certain that the greatest objection to tracks and the strongest argument which is now offered in favor of free wheel public carriers will have been met.

THE RIVER

THE Desplaines River at Joliet has or will have three important functions.

1. As the Chicago Drainage Canal.
2. Water Transportation; Lakes-to-Gulf Waterway.
3. Water Power.

The ideal plan will develop all three functions to their maximum efficiency, provided, however, that the interests of Joliet are safeguarded.

First. The sewage matter from Chicago must be provided with sufficient dilution or must be so treated that disagreeable odors are eliminated.

Second. Transportation on the river must not unduly interfere with the city streets crossing the river.

Third. The southern part of the city must be protected against any possible flooding from the river.

The Drainage Canal feature is unavoidable. Its objectionable purpose must be minimized by modern methods of sewage treatment such as the activated sludge process being installed in the stock yards. There is reason for belief that the interests of other towns on the river throughout the State will compel a recognition of their rights in this respect and that conditions will eventually be greatly improved.

Water Transportation and Power

Joliet will benefit greatly from the cheap water transportation as this will mean cheaper raw materials, such as coal from the southern part of the State, ore from Duluth and timber from Michigan.

Cheap and abundant hydro-electric power would be a great advantage, especially in view of the use of electricity in

metallurgical processes. This method is still in its infancy. With electric power and processes the smoke nuisance will be greatly abated.

Several projects for the development of water power have been considered in the preparation of this report with especial regard to their effect on the City Plan.

The one prepared by the Engineers of the Sanitary District has been regarded with favor because it develops the maximum water power. By means of raising the level of the water to the existing level above the dam at Jackson Street the necessity for a lock at that point is avoided. By this proposal the city would receive from the Sanitary District the land owned by it on the east bank of the river which will form a useful and beautiful parkway along the water front.

South of the Rock Island Railway a frontage of 1,500 feet will be obtained for the purpose of general storage and transfer of freight between the river and the railways. This is discussed under Railroads.

There is incorporated in this plan the recommendation of Mr. C. D. O'Callahan, formerly Commissioner of Public Works of Joliet, suggesting that in the vicinity of Jefferson Street and Cass Street bridges the channel for navigation be moved west by taking the property between the Illinois and Michigan Canal and Bluff Street. The merit of this recommendation lies in the fact that it avoids excessive damage to properties lying between the river and Joliet Street. If the present channel is used for navigation the incline approaches to the new bridges would extend as far east as Joliet Street, rendering the adjacent properties inaccessible and necessitating the permanent closing of Desplaines Street.

The Potential Recreational Features of the River

It is unthinkable that the Desplaines River will always be a drainage ditch. Federal or State legislation will sooner or later demand that the disposal of untreated sewage into the river be prohibited. This will not apply only to Chicago but to all communities along its banks.

At this time when river front property is undesirable and when values are low,

land for parks and public spaces should be acquired in order that facilities for boating may be developed to meet the demands of the future. When it is considered that a still water pond, five miles long, will doubtless be available for the use of Joliet the possibilities of the future value of the water front are not an idle speculation.

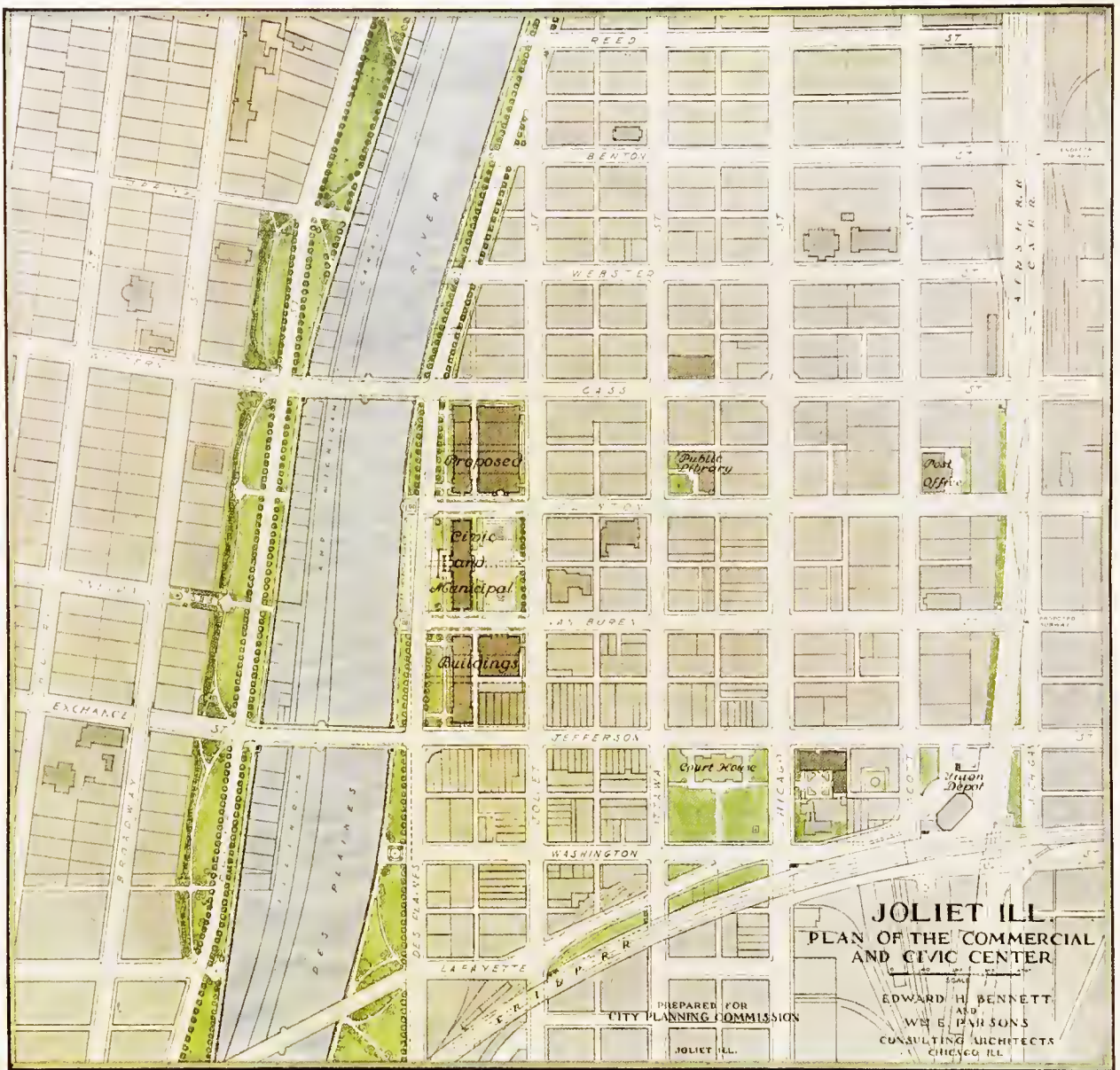


LYONS, FRANCE.
The Bridges Across the Rhone.



LYONS, FRANCE.
View of the Rhone River Front.

THE COMMERCIAL AND CIVIC CENTER



PLAN OF THE COMMERCIAL AND CIVIC CENTER.

The extension and improvement of Desplaines Street and Bluff Street as river-front parkways may be accomplished in connection with the Lakes-to-Gulf Waterway. These parkways will form convenient and attractive approaches to the heart of the City.

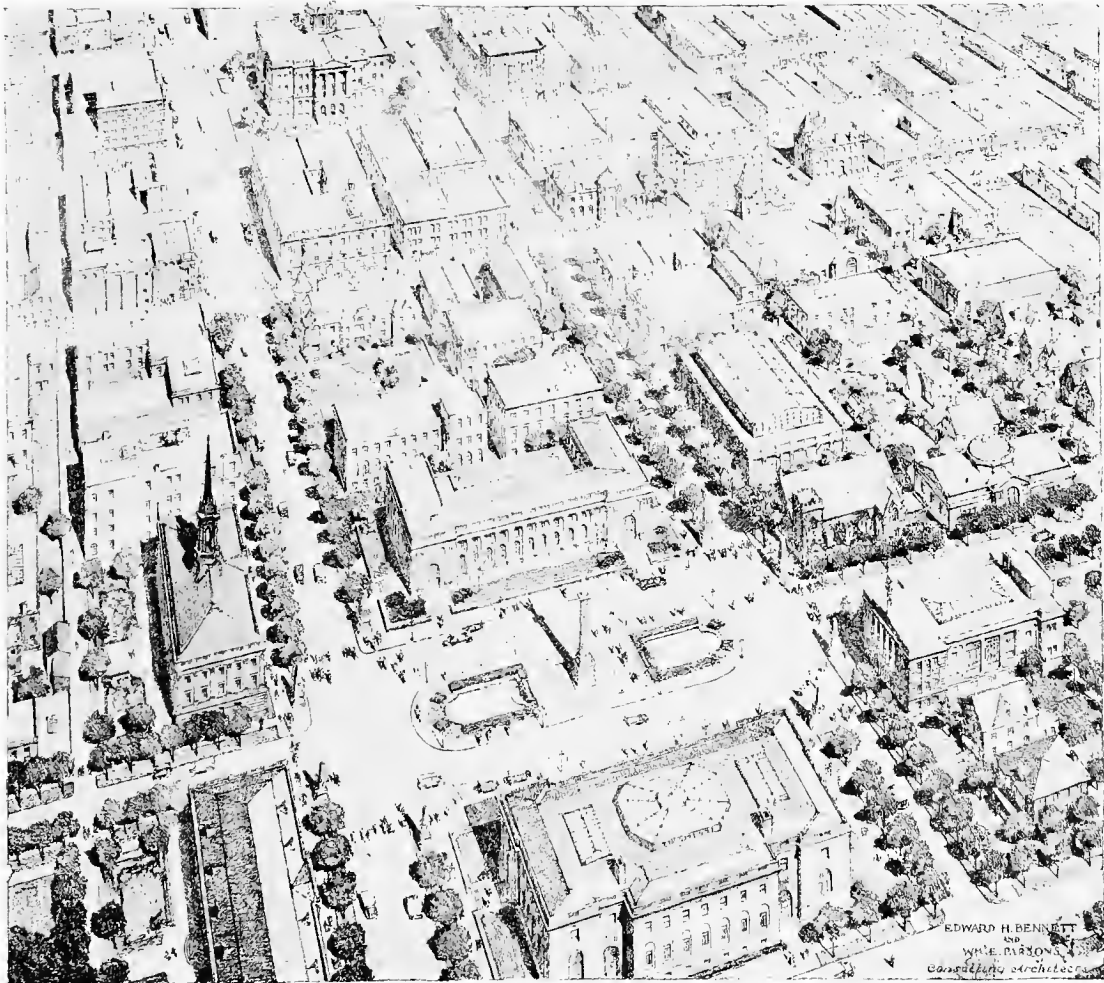
MUNICIPAL BUILDINGS AND CIVIC CENTER

BOTH Municipal and County Administration Buildings are required in Joliet; the former being at present in rented quarters, the latter requiring increased office space. It would be well if the Municipal and County Buildings could be parts of the same group, as is now frequently done both for the purpose of public convenience and as an expression of civic unity. But, unfortunately, conditions are such that this would be improbable of achievement in Joliet. The acquisition of sufficient property for municipal buildings adjacent to the County Court House square would be very costly; the erection of a County Building on a new

site is impracticable under the peculiar terms of the deed to the present site. It is proposed therefore to establish a location for future Municipal and Civic buildings to include a City Hall, with police and fire stations, an auditorium and possibly a Museum and Armory.

A number of possible sites in the central district have been considered from the standpoint of accessibility and public convenience, cost of property and architectural grouping.

The site recommended, the three blocks between Joliet and Desplaines Streets, extending from Jefferson to Cass Streets, has exclusive advantages; the properties



PROPOSED CIVIC CENTER AT BLOOMINGTON, ILLINOIS.

are mostly depreciated in value, the site is accessible from the two most important east and west arteries, Jefferson and Cass Streets, and also from Clinton and Van Buren Streets; the opening of a subway at Joliet Street and the development of Desplaines Street to form a parkway along the river makes all parts of the site accessible from north and south arteries. The widening of the river channel and the development of a parkway along Bluff Street with terraced gardens on the bluff as will be possible with the projected Desplaines River improvement; also the construction of well designed bridges; all these changes present an unusual opportunity for impressive grouping of buildings.

The County Court House can be enlarged so as to give double the present capacity, as fortunately it was not placed in the center of the block. If certain parts of the roof and the tower were rebuilt the building as a whole could be rendered architecturally acceptable.

The site at the southeast corner of Chicago and Jefferson Streets, owned by Will County, might be used in connection with the adjacent property for the development of a public Plaza or it will make an admirable location for a public building. As shown on the plan of the Commercial and Civic Center it is suggested that the main part of any such building be placed at the corner, extending the full distance along Jefferson

Street so as to take advantage of this as business frontage. The southern part of the lot could be a garden which should be screened off from the street by an arch or colonnade. The garden might contain a memorial or a fine fountain, standing where it would be visible from Chicago Street and from the main rooms of the building.



SPRINGFIELD, MASS.—Municipal Building Group.

PARKS, SCHOOL GROUNDS AND RECREATION

IT has been generally accepted that one acre of park and playground per 100 of population is required and a large number of progressive cities are maintaining this standard. It has been stated by a well known social worker that crime in our cities is to the greatest extent simply a question of athletics. Police officials agree in giving approval to this statement. A recent police report in Chicago stated that delinquency decreased by one-fourth within a radius of one-half mile from a new athletic field while conditions remained unchanged beyond that zone.

However, up-to-date methods in dealing with public recreation take into account the use of all the recreational facilities, both public and private, including schools and clubs. Schools and their playgrounds are thus used intensively by serving evenings, Sundays and during vacation.

In 1916 a thorough survey and sound recommendations regarding parks and recreation in Joliet were made by Mr. J. E. Rogers, Field Secretary, Playground and Recreation Association of America. It was his opinion that the existing park areas (including school grounds) within the city were for the present sufficient if properly developed and supervised. The general plan now submitted does not, therefore, provide additional park areas within the present city limits except the marginal parkway strips along the Desplaines River and Hickory Creek and the triangle adjacent to Columbia Street. It does, however, strongly recommend the proper development of unused public lands such as that on Hickory Creek near McKinley Avenue.

Outside of the present city limits new park and playground areas have been included in the plan. The sites indicated are general rather than specific and are located approximately one mile apart, so



SCENE IN PILCHER PARK, JOLIET.

that a park or recreation center may be within a half mile walk from the most distant point.

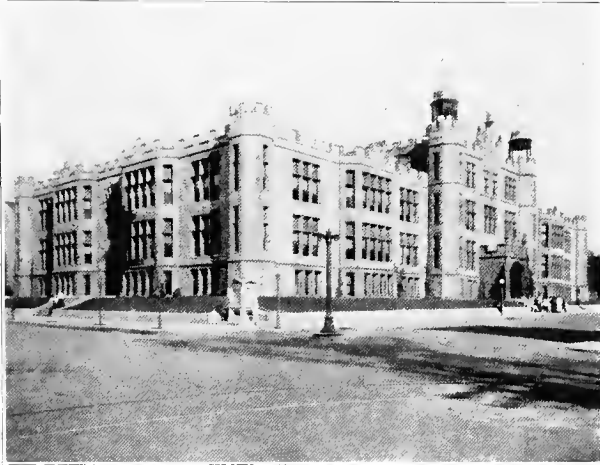
Public recreation spaces are today classified so that a definite use can be made of them. They are:

1. School Playgrounds used as outdoor gymnasiums during school hours. Their use should of course be expanded to the limit of their facilities.

2. Playgrounds for children under 12 years of age. These have little relation to schools. They need not be larger than 50 feet square and should be located close together, on lands not available for building or as a definite provision in laying out new subdivisions. This type of playground has not been studied in detail in this report.

3. Athletic Fields for track events, baseball, tennis, etc., located as before

stated about one mile apart and having a minimum area of 6 $\frac{1}{2}$ acres. An athletic field should be designed to provide a baseball diamond, children's playground, open air gymnasiums for men and women, swimming pool and a field house. Athletic



JOLIET TOWNSHIP HIGH SCHOOL.

fields may be advantageously combined with school grounds as at the Washington School.

4. Parks of the larger type for golf, driving, skating, boating. The value of public lands of this class is too well known to be discussed here. They should be added and expanded to keep pace with the population growth at the ratio of about one acre

of park to 100 people. A part or parts of large parks may take the place of an athletic field if its topography permits and if it is properly located with reference to housing areas.

Mr. Robert Pilcher having presented to the people of Joliet the park lands previously known as the Forest of Arden, one of the dreams of the City Plan Commission has already come true. This tract, which will be known hereafter as Pilcher Park, is one of exceptional beauty, and Mr. Pilcher's gift is not only one of the most generous gifts in the history of Will County but it is one that will be of lasting benefit to all of the people of Joliet and vicinity.

In a prairie country such as surrounds Joliet—nearly all of which is under cultivation—the preservation and development of this fine section of forest land in its primeval state should have the co-operation of everybody. Its recreational and educational values are undisputed.

Pilcher Park forms practically a continuation of Highland Park and these two parks should be connected with parkways by taking over the low lands along Hickory Creek which are not useful for any other purpose.



SCENE IN WEST PARK, JOLIET.



SCENE IN HIGHLAND PARK, JOLIET.

Hickory Creek

The suggestion of Mr. C. D. O'Callahan, of Joliet, that a sewer be laid in the bed of Spring and Hickory Creeks is strongly endorsed. This would remove all

sewage from the Creek and make it attractive for swimming, a source of recreation not elsewhere available in Joliet.

Other Proposed Parks

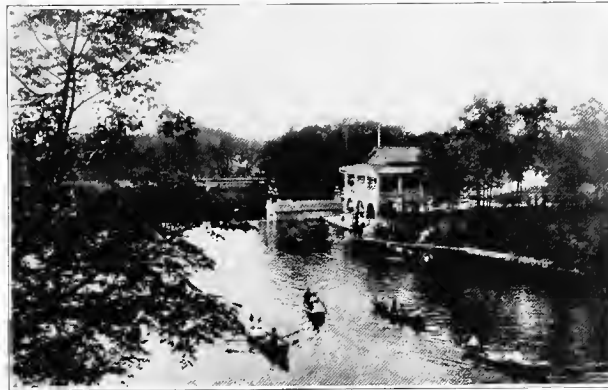
A park about 200 acres in extent is proposed for the west side, and two smaller parks to the north, one on the west side

and one on the east side of the river, are recommended, having an area of 75 to 100 acres each.

Parkways

Proposed parkways and boulevards are indicated on the "Plan of the City and Vicinity." Such streets should be restricted as to traffic or should have separate roadways for passenger and commercial traffic. They should be maintained

by a Park Commission and planted with suitable trees and shrubbery. A fine opportunity for a street of this character is offered in the case of Bluff Street. A scheme of roadway, paths and general development is shown on the "Plan of the Commercial and Civic Center."



SCENE IN DELLWOOD PARK, JOLIET.

SPECIAL FEATURES

Airplane Stations

The acquisition of airplane stations is recommended. The airplane will become an important element in commerce and transportation. Already mail service is in successful operation and is being extended.

The cities that provide facilities for airplane stations will be provided with air mail service and be able to maintain a distinct advantage over other cities.

Two locations are suggested on the plan, one east, the other west of the city. These are about as near the center as open unimproved areas of sufficient size can be found.

In addition to the level and unobstructed landing areas, provision should be made for space for hangars, repair shops, quarters, etc. It is desirable to have rail service in order that fuel and supplies may be delivered at minimum cost.

Municipal Art and Architecture

While this City Plan has been made extremely practical and has chiefly taken into account the actual needs of the future city, still the fact must not be overlooked that no city can become truly great without recognizing the importance of beautifying its streets and avenues. Artistic drinking fountains, monuments, arches, historical tablets, sculp-

tural and architectural masterpieces should not be overlooked. Plazas, where public gatherings may be held and band concerts given, should be laid out wherever possible. All of these things go far toward making a city beautiful. Therefore, though utility must naturally be the first consideration, no opportunity should be lost to make Joliet a city of beauty—a model of its kind.



L'ARC DE TRIOMPHE
(Arch of Triumph) in Paris, a World-Renowned
Example of Architectural Beauty.

Street Fixtures

It is recommended that a comprehensive system of street lighting be devised, employing the most modern and efficient types of lamps and the most sightly and appropriate fixtures. Business streets, boulevards and residence streets each should have their appropriate lighting systems and fixtures. Where business streets have surface car lines the trolley poles should be utilized for lamps, preferably at a height of about 16' from the

pavement, with double lamps where greater illumination is desired.

Important thoroughfares such as Chicago Street may be lighted in this way. Residence streets should have simpler and smaller fixtures, either of metal or of concrete with the source of light about 11' from the ground so as to avoid interference with the branches of trees.

At street intersections the street names, together with the block numbers,

should be visible at night by means of translucent or perforated signs.

Public squares such as the Court House Square and the proposed Civic Center should be provided with means of specially brilliant illumination for special occa-

sions lest these public places seem dead in contrast with the usually well lighted places of business.

The river-front parkways and the new bridges will offer opportunities for splendid lighting effects.

Sewers

With the proposed change in level of the water of the Desplaines River, extensive alterations of sewer mains will be necessary. The subject has been studied by Mr. C. D. O'Callahan, formerly Commissioner of Public Works, and his suggestions are:

(a) To construct an intercepting sewer along the east bank of the Desplaines River and abandon the slough drain south of Jackson Street, which for most of its length is located on private property; (b) to construct an intercepting sewer along the west bank of the Desplaines River south of Marion Street; and (c) to lay a sewer in the Spring and Hickory Creek beds, emptying into the Desplaines River below the proposed dam.

These improvements in the sewer system it is pointed out will unify the problem and make possible a future purification scheme; provide for disposal of sewage for a greater Joliet, and render Hickory Creek a clean stream, thus restoring its possibilities for recreation.

It is possible that the State or Federal Government will ultimately demand the purification of all sewage emptying into the Desplaines River and a new sewer scheme for Joliet may not be comprehensive unless this probability is given consideration. The construction of intercepting sewers along the river, discharging at points near each other, will be a step toward making purification a simple problem.

Markets

Under the heading of Railroads and the City Plan a location for a market (wholesale and retail) has been recommended. The area lying west of Desplaines Street and just south of the Chicago, Rock Island & Pacific Railroad crossing is the one to which reference is made. At this point rail and water facilities may be developed, storage warehouses and cold storage plants may be erected and the whole area between the Desplaines Street subway and McDonough Street should be developed and co-ordinated so that facilities for handling goods for interchange, export and local consumption will be of the best and consistent with the volume of business.

The effect of inefficient and wasteful handling and merchandising methods upon the cost to the consumer of perishable foodstuffs has been studied in close detail by many authorities.

The marketing methods, that is, the steps in the progress of produce from the grower to the consumer, have many ramifications, but an opinion as to how they may be improved would be of little local value. It is certain, however, that preventable waste, excessive teaming bills, demurrage and track storage charges through inefficient terminal and store equipment have a bearing on the local wholesale prices.

Broadly speaking, the typical process of marketing might be said to have four middlemen—the country shipper, the local receiver, the jobber and the grocer. Of these the first three are attended by the least expense, while the retailing is by far the most costly link in the chain. From the foregoing it would seem that Joliet's problems are:

1. To develop efficient wholesale handling of provisions.
2. To effect a saving in the retailing of foodstuffs.

Under the first of these comes the proper location and equipment of a wholesale market.

Retail Markets

Under the second the consumer is concerned with:

(a) A method of obtaining his supplies which have come from the jobber or through the wholesale chain. This includes such items as sugar, meats, citrus fruits, truck and fruits out of season.

(b) A method of procuring produce from the grower direct, such as butter, eggs, truck, apples, poultry, fruit in season.

Obviously if produce of the latter class can be cheaply delivered to the consumer without getting into the wholesale routine of the former a very considerable saving will have been made, and the same machinery that handles the local produce may be able to deal also in that received from wholesale sources, or the former class.

The corner grocer is the present medium through whom the wants of the consumer are served, handling as he does everything that is salable whether it be brought from the wholesaler, truck peddler or the producer. He competes with the huckster and altogether the heavy burden due to retail charges does not result in excessive profits for the retailer, but exists rather because of the expensive way in which retail trade is carried on.

Municipal markets, local curb markets for farmers and hucksters, co-operative and quantity buying and chain stores are the surest ways of cutting the retail charges. When the consumer gives up the telephone and delivery system and premiums and is prepared to "pay cash and to carry," the central retail market and the curb markets will be a reality and even chain stores and well conducted neighborhood shops will be able to do business without the enormous waste which the consumer is now called upon to bear.

Curb markets have been installed in several eastern cities in recent years. Some have been quite successful, but it is noticeable that this is true to the greatest extent in poorer communities and where people are willing to take the trouble to buy carefully. Curb markets opened in Scranton and Allentown in 1917 and 1918 greatly increased the consumption of perishables and reacted satisfactorily back to the farmer. Prices ran from 80 per cent to 33 per cent of those charged at the stores.

The Food Administration kept records of the Scranton market, which showed total sales of \$350,000.00 worth of food, saving directly \$70,000.00 to \$100,000.00 and effecting a much larger indirect saving by bringing the prices down generally.

Surveys

It is recommended that the City provide itself with accurate and comprehensive topographical maps of the city and vicinity without delay as a basis for the intelligent study of the planning of public improvements.

A general map should be drawn at a scale not smaller than 200 feet to the inch. Roads should be accurately located and

contour intervals of 5 feet should be shown and street elevations indicated. The limits of the map should extend well beyond the corporation lines so as to include a territory 20,000 acres in extent.

Benches should be established and grades fixed on all existing streets, as well as on those that are added from time to time. The system of outlying streets sug-

gested on the plans must be revised on the basis of such a survey, as the drainage scheme cannot be designed properly until the survey has been made.

The steps of technical procedure might be the establishment of points and traversing and leveling of the city and vicinity and the co-ordinating of these points, and the surveying with relation to the co-ordinates of existing streets and important ownership boundaries. This work would form the basis of all city maps, levels and boundary descriptions. The surveys should be recorded in the form of an index map, a topographical map in sections, record sheets at larger scale showing details of public construction, sewers,

water lines, etc., and a system of indexing and filing of maps, corrections and ordinances relating to grades, permits and franchises.

Attention is here called to the very great possibilities for preliminary study offered by the recent development in photographic survey by airplane. No service has yet been organized for this work, but it is a possibility and it may be noted that as a result of the practice work done by the Baker Field Aviation Camp near Rochester, New York, a complete set of negatives of the City of Rochester exists from which a map may be made giving the city in all its details. These maps may be made fairly accurate as to scale.

CONCLUSION

City Bonds, City Planning and Elementary Justice

The assessing of the cost of proper city development and its relation to a well thought out program is probably best expressed in the recent report on the Plan of Minneapolis prepared under the direction of the Civic Commission.

"Minneapolis is constantly and rightly issuing bonds to obtain the money with which to pay for municipal improvements of various kinds. These bonds are payable in 30 years, and in order to provide funds whereby the money will be on hand to redeem them at maturity, a sinking fund is created into which payments are made each year, and in addition each year the interest must be provided. This means that, whenever bonds are issued, the pop-

ulation of each succeeding year for 30 years is thereby compelled to pay interest and sinking fund charges on these bonds.

"Now obviously, if we propose to compel the taxpayers of the future to pay these charges for some improvement which we will get now, justice demands that we make that improvement a thing which will be worth to the taxpayers of the future what we are compelling them to pay. This means that merely to do rudimentary justice we should when we issue municipal bonds forecast and to some extent provide for the needs of the population that will exist at and toward the end of the life of such bonds. Rudimentary justice demands comprehensive city planning.

Less Ultimate Expenditure for an Ultimately Greater Result

"This period of the term of bonds, gives the minimum of time that should be contemplated in city development plans. Indeed, that period is, if anything, too short. Fifty years is the minimum that present street plans, for instance, should contemplate; plans should be prepared that will not be completely executed, and, hence,

that will not call for all the money necessary to realize them, until a period of fifty years has run its course. City planning does not propose the ultimate expenditure of any more money than a city will spend anyway; indeed, it will result in less expenditure, altogether. It does propose that whatever is spent shall be spent to

get the greatest return possible in the way of increased values for the land of the entire city, in the way of resulting increase in municipal income from taxation and increased borrowing capacity, and, hence, ability to undertake and carry

through big metropolitan things; and last, not least, it proposes to get the biggest possible return in the greatest of all municipal assets, the health and happiness of every child, of every boy and girl, and every man and woman in the city.

The City's Continually Increasing Capacity

"It is little appreciated that contemporaneously with the growth of the population of a city there is a concurrent growth in its financial capacity. There is practically no appreciation at all of what that growth in capacity in the future means to us in the present. A city of 1,500,000 will obviously undertake a project involving an outlay of \$5,000,000, as easily as a city of 300,000 would undertake a project involving an outlay of \$1,000,000. When put thus, there is ready acquiescence in the statement, but its corollary is not foreseen.

"If the city of 30 years from now can as easily bear a burden five times greater than one undertaken today by a city one-fifth the size of the future city, and if today's plans should contemplate a minimum period of 30 years for their complete realization, it follows that today's plans will be far within the capacity of the future city, and hence probably far below the needs of the future city, unless they are carefully graduated from the present capacity of the city up to five times that capacity. Each decade will undertake bigger and bigger work—and be able to undertake it. Any plan that is to be carried out through a period of 20 or 30 years for which the present capacity of the city is sufficient, is to be judged, because of the fact alone, as probably inadequate, as probably forecasting a result that will not be commensurate with the then existing needs."

From the foregoing it should be understood in the clearest possible way that there is no suggestion for a scheme involving the immediate expenditure of large sums of money. It is suggested that a well-planned program be laid down to guide the city in its future development.

Many improvements are necessary and some of them will be accomplished whether or not a program in the form of a city plan is laid down. Betterment will be expensive, but the cost will remain in the property that is benefited and values of all Joliet interests will be advanced.

Utilitarian projects are worthy, but it is often no more costly to do a thing well than it is to make it just useful. A finely executed subway or viaduct is no less useful because it is artistic.

Special acknowledgment is made of the co-operation of Mr. C. D. O'Callahan, formerly Commissioner of Public Works, in furnishing information regarding existing conditions and valued suggestions as to the Desplaines River and Hickory Creek improvements; also of the assistance rendered by Mr. H. T. Frost in the classifying of data and in the preparation of the plans.

Respectfully submitted,

EDWARD H. BENNETT
and
WILLIAM E. PARSONS.

L'ENVOI

“TODAY is that tomorrow of which yesterday we hoped so much.” If tomorrow we would not again be disappointed we must act today.

No one thinks of claiming a panacea in city planning; but its results reach far, and in many directions.

The love of our fellow men, of the man in the street; the regard for his physical and moral welfare, for his ability to work and his opportunity to play; the provision of things that will insure in him the spirit of civic pride; the chance for him to realize the beautiful and the gentle things of life, “the rift of dawn, the reddening of the rose”; these constitute the spirit of city planning that surges upward through its many manifestations, and that is voiced in the Greek proverb:

“To make our city loved we must make it lovely.”

